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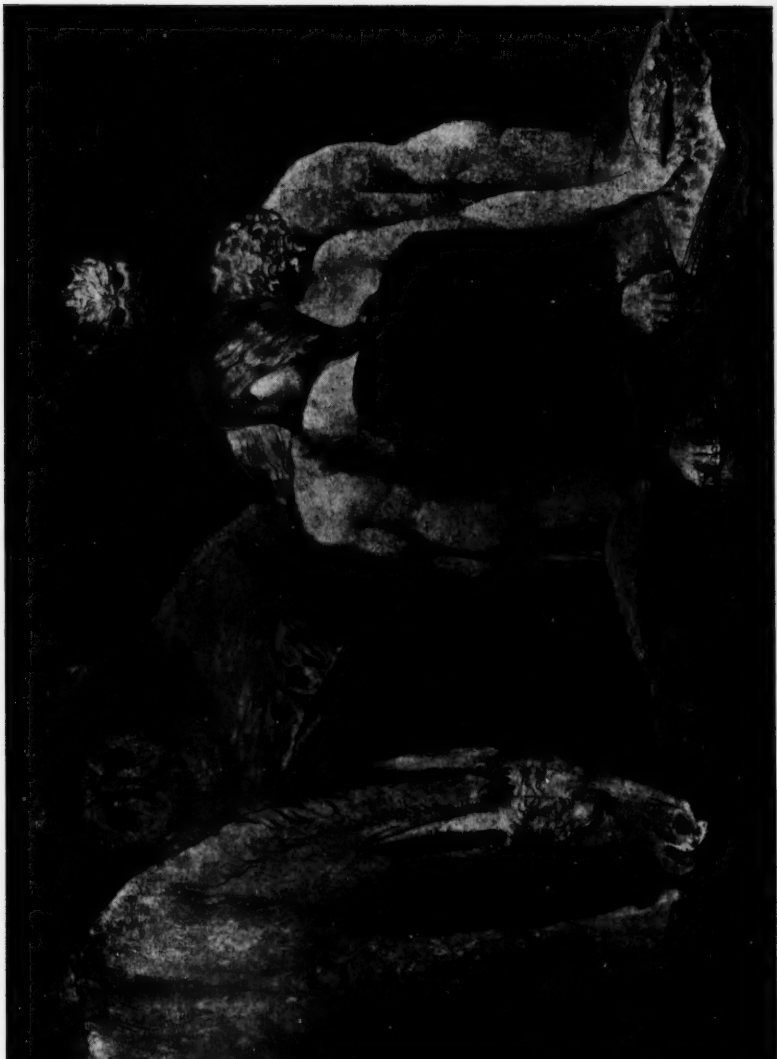
A Journal for the History and Interpretation of English and American Civilization

MAY, 1955 ◆ VOLUME XVIII, NUMBER 3



THE TRIPLE HECATE

BY

WILLIAM BLAKE
(1757-1827)

In ancient lore the moon goddess had three aspects: as goddess of heaven she was Phoebe, as goddess of earth she was Diana, as goddess of Hades she was Hecate. As an infernal deity "The Triple Hecate" became the patroness of sorcery and magic, of revelers and fairies—as Puck proclaims in *A Midsummer Night's Dream* (V. i.):

> And we fairies, that do run
> By the triple Hecate's team
> From the presence of the sun,
> Following darkness like a dream,
> Now are frolic.

It is not surprising that this third aspect of the Triple Goddess should have appealed so strongly to William Blake. In this large and powerfully imagined concept of Hecate sitting in a mysterious and weird moonlit underworld, Blake displays a monumental quality of his genius not hitherto represented in the Huntington Library collection of his work. Only a very few of the Hecate color prints exist today. Probably the best known is the print presented to the Tate Gallery in London by W. Graham Robertson in 1939.

Blake produced at least twelve large color print subjects and they are among his grandest and most important works. His method of executing them is still very perplexing, and in each case there appears to be such a considerable amount of hand finishing that each print is virtually an original drawing, or, as here, painting.

The Huntington Library's recently acquired *Triple Hecate* measures 16 3/8" x 22 1/16" in its present state. The colors are presumably less dark than in the Tate copy and are of a curiously metallic and somber quality in shades of green, green-blue, and tawny gold. It belongs to the period of about 1795.

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The Uses of the Humanities*

By HAROLD W. DODDS

IN THIS SETTING, surrounded by the monuments of the past which Mr. Huntington assembled, one may be permitted to introduce one's remarks by an observation concerning American life in general; for the Huntington Library and Art Gallery are an expression of our culture today as well as a record of years gone by. On the one hand they are examples of the importance which America attributes to the spirit of private enterprise and the material rewards thereof. On the other hand they personify appreciation of those human values which set men off from animals and which are revealed and cultivated by those branches of knowledge which we term the humanities. Fortunately for our country, this conjunction of interests occurs more frequently than we sometimes imagine or our foreign critics are apt to realize. For many men the acquisition of wealth has been attended by a sense of obligation to devote it to the public welfare. Mr. Carnegie's philosophy that it was the duty of a man to acquire wealth but to die poor, propounded fifty years ago to the consternation of some of his fellow capitalists, is today in the best American tradition. Mr. Huntington did a great deal to promote this tradition. After years of profitable business activity he turned to building this library and art museum and to them "he devoted his chief attention during the later years of his life." As you well know, these magnificent memorials are no accident, no afterthought.

*An address delivered on Founder's Day, February 28, 1955, at the Henry E. Huntington Library and Art Gallery, San Marino, California.

Through enterprise, energy, and good taste, men like Mr. Huntington, Mr. Morgan, Mr. Folger and others assembled in the first decades of this century rare, beautiful, and timeless treasures in a manner unparalleled since the days of the Renaissance princes. Never before had the possessors of such treasures so generously turned them over to the general public as gems to enjoy and to scholars for both artistic delectation and scholarly enrichment.

As one having to do with a university I cannot refrain from noting the way in which the Huntington and similar libraries and collections co-operate with the universities as well as serving as centers of research within themselves. This is extremely significant from our standpoint, for no longer can any university, if one ever did, aspire to own everything needed for the research of even its own scholars. So far as the universities are concerned co-operation must be the keynote for the future rather than the older practice of competitive races for distinguished acquisitions. In this sense the universities, if they are to do their collective duty in the light of rapidly rising library costs, must find themselves in losing themselves. The role of the Huntington in the coming era of co-operation is to continue what she has been doing, viz., to assemble and make available great collections of a sort of which the rest of us can hope to possess only samples for ourselves. This service added to the work of your own scholars is assurance that the vision of Mr. Huntington will find continual renewal and fulfillment.

It is always a pleasure to visit this library and art gallery, to meet friends here whom one sees all too infrequently and to remember others of earlier days.

The present director and his wife are friends of many years' standing. It is virtually correct to say that Mr. Pomfret's professional career began at Princeton. "As the twig is bent, the tree's inclined," and we had him when he was on the twig side of life. But we had the insight to ask him to be an associate dean as well as an associate professor of history. So excellently did he perform in both capacities that before long we lost him to a post of higher honors elsewhere until he eventually came to the eminent position he fills today. A man is often but the lengthened shadow of his wife and the many friends whom Mrs. Pomfret made while she was with us

have remained her friends to this day. We delight in their too infrequent visits to their earlier home.

The Huntington Library and Art Gallery are dedicated to humane learning, and it was natural that Mr. Pomfret should suggest that I talk about the humanities on the day set aside to commemorate the founder. My theme is "The Uses of the Humanities," for I believe that they are useful to both the individual and society.

As a humanist I am about the ultimate in amateurs. However, this does not disqualify me as a college president from talking about the humanities, or indeed any other subject. A contrary principle would rule out most speeches by members of my guild, to the sorrow of many chairmen of program committees who invite us to talk on all sorts of occasions, particularly when a more eminent speaker has failed them. (Parenthetically, Mr. Pomfret's invitation is of more than a year's standing, so I flatter myself that this time it was not wholly a case of any port in a storm.) I am further reassured of my right to have some opinions regarding the humanities by a comment of an old friend and frank critic who, after complimenting me on some remarks I had just made in praise of humanistic learning, immediately deflated me by adding (and he meant it), "I have often noticed that the best speeches are made by people who know least about the subject." So I shall plunge forward with at least a good old college try into the matters on which learned scholars disagree, in the conviction that the issues at stake are too close to the life and death of our society to permit a professional monopoly over them.

My thesis, I repeat, is that the humanities do not represent useless learning, that on the contrary they are not only useful but indispensable. They bring "clarity, unity, and universality to a nation and a world which is confused, divided and specialized"; they uphold the worth of the individual and the banner of personal excellence against dictatorship by the mass mind in an age of mass production of goods and services, of mass amusements and mass education. These are not their only functions but, I submit, they alone would establish their utility.

In the current fictional *Memoirs of Hadrian*, the Emperor is made to say, "A part of every life, even a life meriting very little regard, is spent in searching out the reasons for its existence, its starting

point and its source." There is really no need to search further to establish the utility of the humanities, for they furnish both the vision and the clue. Although we non-scholars, mere men in the street, cannot enter into the delicate distinctions and abstruse shades of thought in which academic humanists are prone to delight, such as the several levels of meaning of a medieval allegory, still we have a right to be heard. For it is in us that humane values reach into the affairs of men. Therefore the average man may properly concern himself with broad effects of the esoteric views of scholars as they are manifested in ideas which fix the course and destiny of nations. For ideas do matter and what the intellectual thinks today becomes the public opinion of tomorrow. Men of action should be making friends with men of scholarship rather than abusing them, as many do these days. It would benefit each side to become better acquainted with the other.

In obedience to the worthy adage that a shoemaker should stick to his last, I shall direct my remarks to the humanities as an element of a college education; why they should be prominent in the curricula of our colleges and why they have not been as effective in accomplishment of their avowed purpose as they should be.

Beset by anxieties and frustrations individuals naturally look about for causes external to themselves on which to fix the blame; and in many quarters today the colleges and universities are being made a scapegoat. You remember the role of the scapegoat in the ancient Jewish ritual of atonement. Annually the high priest unloaded on this unfortunate animal the sins of the whole nation which had accumulated during the year. It was then led forth into the wilderness and pushed over a high cliff to its death.

If he thought about it at all, the scapegoat was doubtless bewildered by what was happening to him, and we of the academic profession also wonder often why we have been drafted for a similar service. Yet formal education cannot escape scot-free from blame. While it is unjust and foolish to berate our college teachers for not being godlings—even a Ph.D. degree, I remind you, confers no supernatural powers—it would be a blind educator who would claim a perfect bill of health for the behavior of our colleges and universities over the past generation. Certainly they have not performed as

admirably as college presidents are wont to assert in speeches to their alumni associations.

It is my considered opinion that our national system of secondary and college education (the two levels are but complementary parts of the same pattern) has been too willing to conform to a pervasive materialism rather than to assert and uphold those qualities of mind and soul which are required of a people to be strong.

By materialism in education I don't mean just stress on making money. I mean the assumption that knowledge related to the natural and the physical aspects of existence, to the neglect of the humane, is in itself an adequate equipment for a happy and useful life. When a college allows the humanities to be "down-graded" in its curriculum, it is denying to its students the full intellectual development necessary to make them strong.

More subtle than crass materialism has been a state of mind among teachers and scholars themselves which pays an exaggerated respect to natural science and the methodology of science, a state of mind which in turn leads to the conclusion that only the sensibly perceived is real, that the behavior of man and the behavior of nature are determined by similar scientific principles of cause and effect. From this it follows that the way to human betterment is to discover scientific laws for men similar to those which describe the operation and evolution of things and animals. Such a materialistic view of human destiny depreciates human consciousness and transforms the spirit of man into an effect rather than a cause, until the old verse about a man being captain of his soul becomes but a silly bit of bad poetry.

The most distinctive feature of the intellectual history of the past two hundred years has been the high position which science has achieved not only as a method for discovering new knowledge about nature, but as a basic pattern for progress toward the fulfillment of all our hopes and desires. Of course the practical success of science through its application to industry and technology, far beyond the expectations or desires of the scientists themselves, has contributed to its great prestige. No sane man is against science or unappreciative of all it has done and will do to enrich our intellectual life as well as to promote human welfare. All that goes without saying,

and need not detain us now. What concerns me today is the deceptive derivative philosophy that science offers salvation in all areas of human purpose. It is only fair to say at this point that on the whole the non-scientists are more responsible for this than the scientists, although not all the latter have been exempt.

Now that science itself is undergoing an agonizing reappraisal, or at least a critical overhauling, which is seriously shaking claims of universality, it is difficult to appreciate an earlier generation's extravagant expectations of human betterment through the application of the scientific method. Fifty years ago a speaker before the Royal College of Surgeons gave voice to an extreme of optimism that is hard to imagine today, but which undoubtedly seemed reasonable to his audience.

"There is no doubt," he said, "that under the reign of science, a striking amelioration in the state of society has taken place. . . . There is some evidence that . . . modern civilization is acting favorably in the direction of making people more reasonable and better conducted. Peace is now the normal condition between civilized states; and there is a growing trend of opinion in favor of settling international differences by the more rational methods of arbitration, rather than by war. Political morality approximates more nearly to that recognized as proper in private life."

I agree that this sounds absurd today—almost like the nineteenth-century claims for the single tax—but heavy traces of it surive to this moment. It is not necessary to labor the point that something went wrong. If science was to unlock the door to the New Jerusalem, mankind surely mislaid the key. The trouble, however, was not that man mislaid the key; he selected the wrong key.

Indeed I think it is correct to say that some major instances of human tragedy, as well as various minor ones, have found their intellectual and moral foundations in a faith in a universal science expressed in cosmic laws similar to those of physics. Consider the ideology of the French Revolution for example. Newton had discovered that the world of nature was a vast mechanism operating in accordance with physical laws which could be discovered by applying mathematics to data suggested by observation and experiment. "Science was henceforth to be a cultural force of the first

order." The intellectuals who participated in the French Revolution were confident that they had discovered social laws as binding on men as Newton's law of gravity. Therefore their duty was clear. It was to manipulate human beings into conformity to these scientific laws of society in a manner not unlike the way chemists manipulate the elements with which they deal. As one of my colleagues has written, never until the French Revolution "had there been an age of such faith in social planning." Robespierre admitted that the guillotine was an extreme measure but he held it to be necessary to lead people away from those old habits and institutions which obstructed the play of natural law in order that they might be directed toward a new era of natural goodness and justice. But the result was the Reign of Terror, an era of unbridled cruelties; France was set back many years and overdue reforms retarded throughout the rest of Europe. The resemblance to the course of Russian Communism and its faith in the natural law of economic determinism is obvious.[1]

Another though less tragic mistake was the way Darwin's theories of natural evolution were built up into a guide to behavior. As you all know the applications were curiously inconsistent. One took the form of a philosophy of the survival of the fittest and a moral code which justified cutthroat competition at home and imperialistic exploitation and war abroad. Another gave birth to the abortive illusion of effortless, inevitable human progress as the law of life, an error from which we are now emerging under the tutelage of some bitter experience.

Turning to a current example, with effects which if not violent are nevertheless serious enough in my view, consider how promptly many thinkers transformed Einstein's theory of relativity in physics into relativism in aesthetic and moral values. An eminent scientist himself has spotted this one. In criticizing those philosophers and popularizers who transmuted relativity in the objective physical world into relativism in the subjective world of aesthetic and moral excellence, Dr. Oppenheimer points out that there is no logical necessity between the two concepts. One has been merely assumed

[1]For a broader elaboration of the association of science with social change by the Secretary of the Smithsonian Institution, see Leonard Carmichael, "Science and Social Conservatism," *The Scientific Monthly*, Vol. LXXVIII, No. 6, June 1954.

from the other. Nevertheless, by a quick jump from one to the other, the conclusion was drawn that any given code of ethics but reflects the mores of the time and is therefore relative to particular times and places, a view which can only encourage a passive neutralism on great issues and a depreciation of the power of self-conscious will.

When we read the less-guarded writings of the people who term themselves scientific humanists we see how their theories can shade off into the "mother knows best" school of thought so close to the heart of the undiluted bureaucrat. A recent article by one, who describes herself as such, argues that our democracy must be purged of clericalism (religion is the particular aversion of scientific humanists) in favor of science as "the most successful organ of general social progress." "Outmoded institutions," she writes, "must be swept away"; "a new integrated society" must be created in accordance with a new morality to be supplied by science. Encrusted habits of thought and morality "must be broken down." It can only be done by the methods which the natural sciences have devised, viz., scientific observation and analysis and the use of controlled social experiments. What a day for the bureaucrat that will be! It suggests the horrors of a species of human vivisection.

This matter of controlled social experiments after the manner of a natural science laboratory is worth a moment's attention. The variables with which physical science deals can be segregated for observation, and factors not considered germane to the experiment can be ignored. That is what a "controlled experiment" means. But you cannot divide a man. You cannot deliberately select some human variable for treatment and disregard the rest. When you try to do so, it is no longer a man that you are studying but a figment of the imagination. Experience with the now abandoned abstraction, the economic man, is proof of that.

As in the case of the physical sciences, the social sciences are contributing much and will contribute more. Were my time unlimited I should talk about how valuable they are in many ways. But it is pertinent to my subject to remind you that they cannot attain the same predictive powers regarding cause and effect as does objective science, because man as a self-conscious being carries within him-

self a capacity for conscious change which no other animal enjoys, however much we can learn about ourselves from studies of animal biology and psychology. The more we know about history the more it seems that history never repeats.

Many will recall also a recent assertion by a dean of a distinguished scientific institution, quoted by Joseph Wood Krutch, that the time has come to recognize our "approaching scientific ability to control men's thoughts with precision," and the remark by Winston Churchill, who was present, that he would "be very content to be dead before that happens." It all suggests a disturbing confidence that a few men of brains will discover the laws of human betterment and then "control" us to conformity therewith. In such a day I shall be happy to be wherever Winston Churchill is, even if it be but on a free-floating cloud without a canvas or paint brush and with only a harp in my hands.

Somehow, utopias based on science, like other utopias, have consistently missed fire. A free people may well note how proposals for achieving human perfection by the methods and laws of natural science easily lead to the fallacy that the police state is necessary to prepare an environment in which the best in human nature is free to function. Mankind must be put in chains for the sake of his own freedom, but the familiar irony is that the police state which puts him there never releases him of its own accord.

I am aware that I can be accused of talking about science in old-fashioned terms of a relationship of mechanistic cause and effect, as if scientific discovery were but a process of collecting and measuring enough facts under laboratory conditions, and little more. This is unfair to science, for it is not the method by which great new discoveries are made. Today we know that basic scientific discovery is the offspring of great theoretical imagination and piercing insight akin to those capacities which produce great works of philosophy, literature, or art. Not long ago a student asked his professor why he had selected a particular one of two possible solutions to an abstruse problem in higher mathematics. Without a moment's thought the teacher replied, "Because it was the more beautiful." It is no accident that so many theoretical scientists and mathematicians are deeply sensitive to music and art. But it is in

forms essentially mechanistic that science holds out its promise to the scientific humanists and, I venture to suggest, will in general continue to be their model for society. The Newtonian principle that merely by accumulating enough facts and by conducting enough controlled experiments we can come to fundamental truth without faith lingers on.

Much has been written and said in the past century about a science of history. As Henry Adams contemplated the coming of such a science it was to "be absolute, like other sciences, and must fix with mathematical certainty the path which human society has to follow." But, he wrote, it would doubtless be so explosive that it would be resisted to the end by capital, labor, the church, and the state. Even the universities, which depend on money from these sources, could not be expected to teach its revolutionary doctrines.

Fortunately today a clearer concept is being revived. Monistic explanations of movements of history according to natural law are giving way to recognition that humanistic values are forces in history. No matter how hard we try to treat people statistically, the conduct of the individual remains, to a significant degree, incorrigibly personal, and this incorrigible personality influences history. If I understand correctly the current thinking of some historians, the reaction away from the extravagant expectations of a science of history has gone so far as to assert that there are no patterns of cause and effect discernible in the facts of history. As Professor Woodward has said: "We know so many facts which lend themselves to arrangements in patterns that we can make any number of such patterns; but we do not know enough to judge between these patterns, or to be sure that we are doing more than pick out chance or superficial resemblances." In my humble opinion the suggestion that authentic history can be no more than an account of unrelated events (which Professor Woodward's statement suggests but which I doubt he really means) is carrying disparagement of methodological interpretation of history too far. I believe, however, as do many of greater learning than I, that the sophisticated historian today recognizes that however objective he strives to be, subjective values, his philosophical conceptual scheme, are bound to influence his selection and valuation of historical data. In short, when an his-

torian begins his book by boasting that he has divested himself of all bias, that he is not recording history as it might have been or should be, but as it occurred, look out for bias.

My old field of political science is passing through an evolution similar to that in history. When he learned that I was to make this talk, Professor Munro wrote me that as a political scientist (which I formerly tried to be) I was qualified to discuss the humanities inasmuch as political science is not a science. "Perhaps you remember," he wrote me, "what President Lowell once remarked about political science; namely, 'it is not a science and can never be a science for it lacks the basic essential of a science; namely, a terminology which is incomprehensible to the average man.' "

Its failure to establish a firm professional vocabulary has not been through lack of trying. But the great obstacle has been that, while social behavior has one foot in the world of nature to which the methods of science relate, it has another foot in the world of human consciousness, the world of human personality and will. We prepare statistical tables and chart social trends, and this is all to the good within reason, but who can say that once a social trend is generally recognized human forces, both conscious and subconscious, do not set in to modify or defeat it?

Furthermore, when political science, however it talks about scientific manipulation, is exposed to the test of statesmanship its strict resemblance to science evaporates. "Successful statesmen," writes Isaiah Berlin, "behave like artists. . . . Historians and psychologists and political analysts, who seek to explain [their] behavior are forced to resort to such terms as 'imagination,' 'political genius,' 'sense of history,' 'unerring judgment,' [matters] which rightly have no place in a scientific treatise." I submit that the preference of the common man for "horse sense" is not surprising or unnatural, for it is social tact, a species of horse sense, that makes a statesman.

Similar principles apply to the other social sciences. All economics today is welfare economics of some sort or another, and it is colored throughout by the economists' idea of the good life.

I fear that I have exhausted you by elaborating the familiar, but from the standpoint of higher education I have not been beating a dead horse. All my experience with thoughtful young people indi-

cates that the exaggerated application of scientific methods to areas of human values tends to weaken their will, dull their aspirations, and engender cynicism toward ethics and the inspired soul of man.

If knowledge of science throws light on one's relationship to the physical world and the social sciences on his relationship to others, the humanities illuminate his relationship to himself in areas which animal psychology does not reach. In a world of mass economy and mass movements and mass thinking, in which so much of the schooling even of children exalts submersion in the group as its objective, the humanities uphold the worth of the individual. They remind us that truth and beauty do not bubble up from undifferentiated crowds. The humanities are the preservers of experience and tradition as aids to wisdom. But they are more than just custodians of the past; they are the carriers and advocates of the ideals by which men live in the present.

They are therefore relevant to every problem which our nation confronts today. Our founding fathers, for example, did not spurn the classics. Anyone who reads their debates and the pamphleteering which attended the adoption of the Federal Constitution will realize how often they invoked classical authorities for guidance on grave issues. And who will assert that they were not eminently successful? Modern statesmen can profit from their example. I have a medical friend who, after years of distinguished practice as a surgeon and teacher, retired to devote himself to research. Each year several scores of undergraduates go to him for advice about the doctor's profession as a career. Students often ask him if there is not some course they can take which will teach them the technique of understanding people, for it is a mark of the moment that we look for techniques—mental gadgets—to apply to problems that can be resolved only by understanding. My friend's stock advice to the students, and he learned it himself by experience, is to read Shakespeare and the Bible if they want to know how to get along with patients.

The humanities cultivate standards of personal excellence in taste and behavior. As Sir Richard Livingstone has so often remarked, they inspire to greatness by putting one in touch with greatness. Nothing, he adds, educates like a vision of greatness and nothing

can take its place. It is always difficult to isolate greatness in the press of current events, because it takes history to reveal it. One will be put to it today to identify it either in the halls of Congress or of the United Nations.

Adequately conceived, all branches of knowledge have their humanistic aspects, for it is a whole human being to which they relate and not a compartmentalized personality. The humanities provide the best specific against the dangers of over-specialization, one of the chief threats against the unity of the complex society in which we live. As a discriminating political science colleague has written: "In an already highly organized life where the scale and clash of organizations is still increasing, and where men have become specialists concentrating their efforts in the operation and direction of organizations in which they work, there is danger that the parts will destroy the whole . . . through the violence of its own centrifugal forces, . . . The power to contain these divisive forces lies only partly in the realm of public policy. Unless the individual can defend his integrity as a whole man against the encroachments of specialization, is it probable that society will do any better in preserving its unity?" It is the values of the humanities that build social and individual integrity.

Finally, there is a private side to a college education as to life, which many educators are prone to undervalue in their emphasis on social living and social action. It is preparation for one's own personal happiness by enlarging one's world of ideas and by cultivating subjective appreciation of philosophy, art, literature, and history, as well as knowledge about them. Access to the humanities should help a man to get more fun out of life as a recuperative relief from the restrictions of the workaday world. It is such a life of the mind and the soul which gives meaning to victory and sustains one in defeat. It is the best protection against that common neurosis, the feeling of being stuck. Such interpretative understanding serves to bring peace and quiet with which to combat the anxieties which so afflict us and which psychiatry alone cannot solve.

The ultimate goal of education should be wisdom. Wisdom is hard to define; it is even difficult to describe what one means by it, and I shall not attempt to do so now. Nevertheless it has a meaning

that we all comprehend in some manner and we recognize it when we see it. Its foundation is not alone capacity to command our physical environment. It relates to ultimate goals and the means by which we may attain them. Its basis is the unity of knowledge in a pattern that enables a human being to put all his resources to work, but it is more than just knowledge. In his *Religio Medici* Sir Thomas Browne wrote three hundred years ago: "Wisdom is God's most beauteous attribute; no man can attain unto it, yet Solomon pleased God when he desired it."

That those of us who teach in colleges and universities and strive to advance learning should seek also to transmit wisdom may seem pretentious. But I hope that in company with other agencies of learning, including this great library and art museum, we shall never be satisfied with any purpose less ambitious. Who will deny that an education that aims at wisdom is an education for use?

Columbus and Balboa in the Italian Revision of Peter Martyr

By George B. Parks

One of the once-rare examples of early Americana in the Huntington Library is the composite Italian volume, printed in Venice in 1534, which marks the first public appearance in Italy of the first official historians of the Spanish discoveries of the new world, that is Peter Martyr and Oviedo; the book is moreover the first substantial Italian account of those discoveries. It has no title of its own, the first part being called "Libro Primo della Historia de l'Indie occidentali" (the Peter Martyr), the other parts being correspondingly entitled "Libro Secondo" (the Oviedo), and an additional "Libro Ultimo" (concerning Peru); we may call the volume for short the *Historia*. It bears no name of translator, editor, or publisher.

The history of the *Historia* has been only partly traced. Ramusio has been connected with it if only because he later reprinted the volume in his great travel collection, the *Navigationi et Viaggi* (Vol. III, 1556), to lead off the American voyages. The volume has been well known to collectors of Americana, a copy appearing early in the John Carter Brown collection, three copies in all reaching the New York Public Library, and a copy going to the Newberry Library. Henry Harrisse listed it in the *Bibliotheca Americana Vetustissima*, and it was his copy which went to the Church collection and thence to the Huntington. Copies are now also at Harvard, Columbia, and the Library of Congress; the national libraries in London, Paris, and Vienna have copies. I do not know if any are to be found in Italian libraries; the volume was not shown in the Columbus quadricentenary exposition at Genoa in 1950-1951.

It has for some time been known that the *Historia* was no ordinary translation. The translator of the important first two parts has been revealed as Andrea Navagero, Venetian poet, scholar, and official historian, who moreover did the translation as a result of

his three-year mission (1525-1528) to Spain as Venetian ambassador to the Emperor. The evidence is a privilege granted by the Venetian Senate on February 19, 1530, after Navagero's death in France in the preceding May, to his brothers to print the books he had left ready for the press: his speeches and poems in both Latin and Italian, his editions of Cicero and Terence, and "uno libro spagnol de Oviedo, tradotto per lui [Navagero] in lingua italiana. item una Descrition de le cosse trovade nel Mondo Novo con uno desegno del dito mondo novo et carta da navegar di Spagna," the last of which items "Andrea Navagero portò di Spagna e di Portogallo."[1] The Cicero, a re-edition of the *Orations*, was accordingly published in 1534, and we know from a letter of Bembo that Ramusio arranged the format with the publisher, and therefore probably supervised the publication.[2] The same presumption may be made for the *Historia*, which the above privilege clearly describes. In January, 1535, Bembo received from Ramusio a copy of the *Orations* and a copy also of two "libretti volgari" on the affairs of the Indies and the new world, obviously the "Libro Primo" and the "Libro Secondo."[3] Further proof that Ramusio supervised the *Historia* is found in the later remark by the scientist Fracastoro writing to Oviedo that Ramusio was "perhaps the first" to introduce Oviedo's work to Italy, the *Historia* being the only such introduction.[4]

As translator of these Spanish histories Navagero had been specially qualified by his mission to Spain. Ramusio had asked him to buy for him books on the new world ("delle cose de las Indias"),[5] and the envoy collected a number to ship back. He also

[1]The privilege is recorded in the *Diarii* of Marino Sanudo, vol. 52, cols. 589-90. In the *Raccolta Colombiana* (Part III, vol. 2, p. 292 [1893]), Guglielmo Berchet first printed it as I give it, together with the brothers' application to the Council.

[2]Pietro Bembo, *Lettere* (Verona, 1743), II, 90-91.

[3]Ibid., II, 102. In his letter Bembo notes an error on page 63 of "Libro Secondo," and we discover that he was in fact speaking of the *Historia*. Bembo thought that Ramusio was the translator, when the copyright makes its clear that Navagero was; I gather that Bembo was not, however, much interested, since five years later he did not recognize the book (*Lettere*, II, 92).

[4]*Hieronymi Fracastorii, Carminum Editio II* (Padua, 1739), I, "Fragmenta," 49.

[5]The information is in Navagero's letter sent back to Ramusio from Spain: *Andreae Naugerii ... Opera Omnia* (Padua, 1718), p. 300.

made contact with men active in the affairs of the new world. On arriving he met at court Diego Columbus, who had succeeded his father as Admiral of the Indies.[6] He became acquainted with the President of the Council of the Indies and with other members, and he speedily became "amicissimo" of Peter Martyr himself, also a member.[7] He expected to learn much from these officials, he wrote to Ramusio. Martyr died in October, 1526; meantime Navagero may have met his successor Oviedo, who published his *Sumario* in Toledo in 1526, and then sailed in April for a four-year sojourn in Hispaniola.

Whether he met Oviedo or not, Navagero met in Seville merchants trading with the Indies, saw some Indians, and ate such Indian food as potatoes.[8] He brought back with him, as the copyright indicates, a map of the new world and an Atlantic chart; in the *Historia* itself, these turn out to be a map of the island of Hispaniola and an Atlantic map, which are described as made by imperial pilots in Seville, one of the maps having been given to the translator by Peter Martyr. The Atlantic map in fact, which survives in only one copy of the *Historia* (in the New York Public Library), is pronounced the "most accurate representation" of its subject at the time, being "almost identical" with the relevant world maps of Diogo Ribeiro of 1529, chief cartographer of the India House in Seville.[9]

So Navagero had access to information from one and perhaps both of his two authors, and also from officials, pilots, and merchants concerned with the new world. It is not surprising that the *Historia* should contain new material, which is the subject of this study.

2

The "Libro Primo" is described on the reverse of its title page as a "Summario . . Cavato da libri scritti dal Signor Don Pietro Martire . . et da molte altre particolari relationi." Despite the word

[6]Ibid., p. 351, in Navagero's *Viaggio in Ispagna.*

[7]Ibid., p. 300, in the letter to Ramusio.

[8]Ibid., p. 315, in another letter.

[9]The judgments are those of Mr. Boies Penrose in *Travel and Discovery in the Renaissance* (Cambridge, Mass., 1952), p. 258.

"cavato" (or "extracted") the book is not in the least a condensation, like the thin *Extraict* of Peter Martyr's book which was published in French in 1532. The "Libro Primo" in fact turns out to be a revision with additions, or in other words a revised version, of Peter Martyr's book. This was published originally in 1516 at Alcalá as *De Novo Orbe Decades*, three decades of ten books each. The work was not a continuous history, but a collection of newsletters to important persons written by the well-informed court official as news came to him from 1493 on. In 1511 he had collected a single decade, in 1516 the three decades which brought the story down to Balboa, in 1521 a fourth decade published independently; only after his death were the full eight decades brought together and published in 1530. The translator used none of the material, however, written after 1521, though Martyr was still writing industriously until his death in 1526. The subject of the "Libro Primo" is then the Spanish discoveries from Columbus to the death of Balboa in 1519; we shall see how Navagero reordered and revised it.

The "Libro Secondo" is identified by a subtitle as a version of the first work on the new world of Gonzalo Fernández de Oviedo, his *Sumario de la natural y general historia de las Indias* (1526). I find it a faithful version, needing no further note here except for the remark that this is not a history but a natural history, an account of the plants and animals of the new world. Oviedo's large history, the *Historia general*, began to appear in 1535.

The "Libro Ultimo del Summario delle Indie Occidentali" is a translation of the first published accounts of the Pizarro conquest in Peru, which had been published in Seville in 1534. The translator could not have been Navagero, who died in 1529, and Ramusio is the obvious person to suspect. The continuity of the "Libro Ultimo" is established by its head-link, which refers to the "preceding books" of the history; otherwise one might think the three books quite separate since they have separate signature numbers, separate pagination in the first two, and no page numbering in the third. The colophon of "Libro Ultimo" notes that the printing was completed in October, 1534, while that of "Libro Secondo" notes the end of the printing as December, 1534. The printer of the three

books has been identified, from the type used, as Nicolo d'Aristotele, detto Zoppino.[10]

The content of "Libro Ultimo" is an interesting amalgam, which has been fully examined by Dr. Alexander Pogo.[11] His analysis reveals that the text of the *Conquista del Peru*, the anonymous apparent original, had been expanded by one half by the interpolation of much material from the second Peru history, the *Verdadera Relacion* of Francisco Xeres. The transmission from Seville was exceptionally speedy. The *Conquista* had been published in April, the *Relacion* in July, and now the Italian *contaminatio* of the two was translated and printed by October. Venice had long since been quick to translate and publish accounts of the discoveries, and it is the more surprising that the substantial works of Peter Martyr and of Oviedo had had to wait so long.

But the Peter Martyr had been considerably revised, as it will be my aim to show now, and revised by a man who was not only an historian in his own right but also a diplomat with access to officials and official information, notably to the maps which were official and to a degree "restricted." Far from being "of no importance," as high authority has pronounced,[12] I venture to find in the "Libro Primo" independent historical value in the portions dealing with Columbus and with Balboa.

3

It is time to note the nature of the revision. First of all, it throws the history into unbroken narrative, abolishing the division into books and the subdivision of each book into ten decades. In reprinting the "Libro Primo" in his *Navigationi* in 1556 Ramusio wisely redivided the narrative into unnumbered chapters with informative summary headings. This third format is the most satisfactory to the modern reader. Peter Martyr's original had no good structural or-

[10]The Quaritch *General Catalogue*, part XV, 36709-10 (1888), as cited by Dr. Pogo in the work mentioned in the next footnote, p. 195.

[11]In a parallel-text edition of the Spanish *Conquista* and the "Libro Ultimo," in *Proceedings of the American Academy of Arts and Sciences*, LXIV (1930), 177-286.

[12]Dr. Henry R. Wagner in *Proceedings of the American Antiquarian Society*, LVI (1947), 283.

ganization and no titles for the subdivisions. His marginal notes of names do not much help the reader of today to find persons or events. On the other hand, the unbroken 150 pages of the "Libro Primo" text must surely have been forbidding to even the hardiest sixteenth-century reader.

With the new continuity (which is of course normal for its time), the original form of a collection of newsletters disappears, and the personal touches are regularly eliminated: dates of writing, conversations with the writer, moralizings, and (the one serious loss) occasional names of informants.

The narrative is often, furthermore, condensed, though not, I think, so as to omit significant detail. The condensation occurs especially in accounts of dealings, one after another, with native tribes. In one part, at least, relating to Columbus' first voyage and the voyages of his followers, the translator seems to have followed the shorter first version of the first decade, the one published in 1504 as the *Libretto De tutta La Navigatione*.

The most important formal result of the new continuity is the transfer of the account of Columbus' fourth voyage from Decade III, book iv, to what would have been Decade I, book ix: following, that is, the third voyage, rather than waiting until Peter Martyr remembered, after he had written up Balboa's discovery of the Pacific in 1513, that he had not accounted for Columbus' voyage of 1502-1504. The story of the fourth voyage in its new position was not appreciably changed by the translator, except that the original left Columbus in Hispaniola at the end of the long hardships, whereas the translation rounds off the story by saying that Columbus died there. (Ramusio was to correct the error in reprinting in 1556.) The error is extraordinary in our eyes; but it is still possible that Navagero, after three years in Spain, while knowing Peter Martyr, Diego Columbus, and others, and having been to Seville where Columbus was buried, might still have missed the fact that Columbus died in Spain in 1506 rather than in Hispaniola in 1504. Actually I do not know that the event was recorded in print before 1535, when it was set down in Oviedo's *Historia*.

The other change in position is the adding, from Decade IV, book ix, of the story of Balboa's last intended voyage and his exe-

cution, together with the account of the founding of the city of Panama. These additions rounded out the story of Balboa and the isthmus; incidentally they included much more detail of the Balboa story, as will be shown.

After rearranging and rounding out, the translator (or perhaps Ramusio in this instance) made numerous factual changes—the adding or correcting of details such as dates, places, and figures. These editorial additions are often explanations of geographical or historical meanings in the events, or clarifications generally. The translator is especially interested in adding latitudes, as will appear. His important additions are made to the stories of Columbus' first voyage and to the history of Balboa, both of which call for our special attention.

The third kind of change is rhetorical, the elaboration of motive and of speeches, and historical generalizing. The narratives of the same two explorers have been extended in this way as well as factually, and so take on drama and meaning. Presumably this amplification has been a prerogative of the historian until recently, and our interest here is to decide if the expansions carry any plausibility.

4

I proceed to give some parallel passages, thinking it simplest to present the juxtaposed Latin and Italian texts in my English version of both.

a. *The beginnings of Columbus*

1516 (sig. a ii^{v}). A certain Christopher Columbus, a Genoese, proposed to and persuaded Ferdinand and Isabella, the Catholic monarchs, that he would find westward from us islands near India if they would furnish him with ships and supplies, thereby not only spreading the Christian religion but also easily obtaining an unimaginable plenty of pearls, spices, and gold. On his insistence, three ships were assigned to him from the royal treasurer, one a merchant ship with covered deck, the others two light merchant vessels without covered decks, which the Spanish call caravels.

1534 (foll. 2-2^{v}). In Genoa, ancient and noble city of Italy, was born Christopher Columbus of a family of the people, and, as is the custom of the Genoese, he took to navigation. In this profession, being of superior

mind and having well learned the movements of the heavens and the use of the quadrant and the astrolabe, in a few years he became the most efficient [*praticho*] and accomplished sea captain of his time. Sailing then as was his custom in many voyages beyond the strait of Gibraltar toward Portugal and those shores [*quelle marine*], he often noticed that in certain seasons of the year the wind blew regularly many days from the west, and knowing that they could not come except from land which gave rise to them beyond the sea, he so fixed his thought on the matter that he decided to try to find the land. And being forty years old, tall, of reddish complexion,[13] of good and robust figure [*gagliardo*], he proposed first to the Signory of Genoa that if it would fit out ships for him, he would agree to sail beyond the strait of Gibraltar and go so far west as, sailing about the world, to arrive at the land where spices grow. This voyage appeared to all who heard of it to be very strange, as to those who have never thought or reasoned about it and who believed that they knew everything about the art of navigation; and they held his argument to be a fable and a dream, even though they had heard said that some ancient writer[14] had mentioned a large island many miles to the west of the strait. Columbus, seeing that no trust was allowed his words, thought of trying the king of Portugal. But at that prince's [court] no ear was opened to him either, since the proud sea captains of that realm believed that none knew the art of navigation better than they; and this only because, though always in sight of land and never going far from it and coming to harbor every night, they had followed the whole coast of Africa which looks south on the ocean. The ancients never had the courage to make this voyage of the Portuguese because they were sure that whoever passed under the equator would be consumed by the sun's heat, and they thought it a fable when it was told them that someone had sailed about Africa from Gades to the Red Sea.[15]

Columbus, being rejected in this fashion and having heard speak of the greatness of soul of the Catholic King and the Queen Isabella, went to their court with the firm intent not to leave until they had fitted out ships for him to sail to discover land in the west. He rehearsed many times to their Majesties and to many important people the arguments

[13]The *Libretto De tutta La Navigatione*, an earlier version (1504) of Decade I, had written: "tall and prominent in stature, red [in coloring], of great intelligence and long face." Navagero would know this text in the popular *Paesi novamente retrovati* (1507 et seq.).

[14]Oviedo was to mention this argument, ascribing it to Aristotle (*Historia general*, book II, ch. iii [1535]).

[15]The account of the voyage of Hanno about Africa was first published in Greek in Basel in 1533; it was translated by Ramusio for the *Navigationi*, Vol. I (1550).

which assured him that he was right; but little heed was paid in this court to his words because he was thought light-minded and because they judged that the thing could be done [only] if one could fly. But God had determined by his means to discover what for so long time He had kept hidden from all the learned men in the world; and after he had stayed some years[16] in that court, God impressed this task on the heart of Queen Isabella, who was a rare woman and of as great heart as anyone who was ever born. Being thus asked one day by Christopher, she persuaded the Catholic King that he should by no means fail to make the experiment, and such was her [power of] persuasion that they fitted out for him one ship and two caravels.

The substantive additions here should be pointed out. Columbus came from the people, whereas Oviedo and Fernando Columbus will endeavor to elevate his family. He was a distinguished navigator before his discovery, and was well trained in theory as well as in practice of navigation. His conviction that lands lay not too far westward was derived from the physics which ascribed winds to the presence of land masses. At forty he applied for help first to Genoa. The reason for his rejection in Portugal was the conceited ignorance of Portuguese captains. Queen Isabella was the decisive agent of his success in Spain, whereas even Oviedo, writing long after the death of both monarchs, did not give the queen the credit that might diminish the king's glory.

Virtually all these additions are, I believe, new in this text. Most of them sound as if they had been gathered from direct testimony, reliable or not, in Spain, and have therefore prima-facie value. The scientific observations might be Ramusio's, but they might equally well have been what Navagero heard in Spain from Spanish pilots. Altogether no such ample account of Columbus' preparation had yet appeared, if I mistake not, in all the contemporary allusions to him. If the new account by Oviedo, official historian of the Indies, which appeared in 1535, was more ample in that it added more about Columbus' early voyages, about his dealing with England, and about the names of his influential partisans in Spain, the Navagero text still holds original value.

[16]The *Libretto* had said "seven" years.

b. *The first Columbus voyage*

The revision adds two items (1516, sig. a ii^{v}; 1534, foll. 3-3^{v}). In the account of the voyage proper are interpolated two sentences:

> Every day [Columbus] observed with the astrolabe the declination of the sun, and at night the height of the fixed stars, not departing from [within] the tropic of Cancer, and the pole star rose for him about 20 degrees,[17] and so he steered his course. Twice a day he cast the lead and observed the nature of the bottom and the depth of the water as he passed.

This use of the instruments would be a reasonable inference. Oviedo's *Historia* was to say in the next year, 1535:

> and [the pilot] with quadrant in hand, regularly at sea fixing the [north] star at night, and, with the astrolabe, the sun in the day. . . . The experienced pilot will watch his pulse, that is his compass . . . to know the North Star, and with his quadrant [fix] its height, and with his astrolabe [fix] the height of the sun . . . and with the lead he will know the depth of the sea.[18]

Oviedo is here describing the regular practice of the West Indies pilots as he had observed them from 1513 on. Unfortunately Professor Morison has demonstrated that Columbus did not use the astrolabe;[19] but the assertion by our reviser that he did was not only reasonable to anyone with professional knowledge but was probably derived (since neither Navagero nor Ramusio sailed the Atlantic) from actual pilots. It could not have been suggested by someone with mere academic training, which Oviedo decries in the same passage as of no use to a pilot. It is a pity that even a reasonable inference need not be true.

The second addition expands considerably the account of the landfall, which in the original runs only "At length they obtained with joy the longed-for sight of land." The revision runs:

[17]The "20 degrees" should be "28 degrees," as the preceding text itself shows in saying that Columbus sailed west by (slight) southwest from the Canaries, which it locates in 28 degrees. This error Ramusio did not correct in the *Navigationi* reprint, as he did some errors in figures.

[18]*Historia general*, book II, ch. ix.

[19]*Admiral of the Ocean Sea* (Boston, 1942), ch. xiii.

Three days before making land, a marvelous vision appeared to Columbus in his sleep, so that, rendered full of joy, he called his companions to him and told them that they would soon see land. And one morning at daybreak he cast the lead, and seeing a certain kind of earth on it, he knew he could not be far off. And he made a more confident guess because the night before an unusually irregular wind had blown which could have been caused by nothing else than a wind blowing from the land.

Moved by these signs, Columbus ordered one of the company to mount the top; not many hours later he began to see afar certain mountains, and suddenly shouted with joy: land, land. The others and those on the caravels, hearing him, also shouted land, land, and fired their guns. Christopher Columbus, seeing his plans achieved so happily with the help of God, was filled with such joy as was marvelous to see. Having fair wind, they arrived off shore at noon, seeing it very green and full of the tallest trees. Arrived, he ordered out the small boats, and twelve men landed with him, the first with a flag showing Christ on the cross, which he jumped ashore with and planted, and then the others disembarked and knelt and kissed the land three times, weeping for joy.

Then Columbus raised his hands to heaven, and said in tears, Eternal God, omnipotent Lord, you created heaven and earth and sea with your sacred word; your name be blessed and glorified, your majesty be thanked who has deigned by means of your humble servant to arrange that your holy name be known and revealed in this other part of the world.

This land is, according to Columbus' reckoning, 950 leagues distant from the Canaries. Staying some time, they learned that this was an uninhabited island, and they therefore decided to sail on. But to leave a sign of having taken possession in the name of our Lord Jesus Christ, he had trees cut down and a great cross made of them, and set this up in place of the flag. They then re-embarked, and continued their voyage in the same fashion. . . .

The vision and the prayer sound like mere invention, though one used by the best historians. The first glimpse of mountains is unfortunate, since both Oviedo and Columbus' Journal, which was of course not available, say that a light was the first thing seen; the salute, the landing party with the Christian flag, and the setting up of the cross are unfortunately not borne out in details by the Journal. But just as we begin to think these additions merely literary, we are surprised by the figure of 950 leagues for the crossing, a figure which is not in Oviedo or elsewhere, and which could not be

merely guessed. It could be learned from the pilots most plausibly. If this be fact, then perhaps other additions in the revised text may likewise stand, though we must admit that a good deal sounds like guesswork or even mere rhetoric. Even so, there is substantive novelty here, and we can see Ramusio's later justification for reprinting in his *Navigationi* both this revised Peter Martyr and the full text of Oviedo's *Historia* (part one), which had ampler but different material. Both were needed to make the best story of Columbus until the *Life* by his son Fernando which was published in Italian in 1571. I do not, incidentally, find in this *Life* any of the changes of the 1534 text.

For the other Columbus voyages, I do not discover extended additions, though there are minor changes and condensations, some more exact locations, and likewise some rhetorical exuberances.

5

As we follow the remaining narratives, which concern the exploring of Tierra-firme and especially of the north coast of the isthmus now called Panama, we are again struck by the effect of tightening and condensing or correction of detail, and of rhetorical finish. In the Hojeda story,[20] the reviser condenses the account of battles with the natives and omits the details of a story of Hojeda and an Indian woman and her avenging husband; he omits the discussion of palm fruits as food; he changes the latitude of the mouth of the Darien River from 8 to 7 degrees; he ends the account of the settlement in the Darien gulf by adding: "they began to build the city of S. Maria dell' Antiqua del Darien, which has since become famous and celebrated on the continent of the West Indies." In the account of Nicuesa[21] he comments on the building of the tower or fort called Nome di Dio that it became one of the first cities of the Indies; he simplifies the story of the native ambush of the detachment sent ashore for water; he interpolates a moral on the plight of the 785 men reduced by hunger to 60:

[20]Decade II, book i; *Historia*, foll. 34-37^{v} (Ramusio, III, 18^{v}-20^{v}).

[21]Decade II, books ii-iii; *Historia*, foll. 38^{v}-39^{v} (Ramusio, III, 20^{v}-22).

Therefore it is not inappropriate to reason from what precedes that with so fine a body of people, armed with muskets and pikes and ready for any great undertaking, and being in that part of the continent where were infinite lands, cities of Indians both rich and abounding in victuals, the said Captain let himself die of hunger rather than try fortune. Certainly he who reads of the things done since by other captains with smaller companies in those parts will understand that the cause arose in the small wisdom of that captain, who must have been weak of will and of little courage. (fol. 39^{v})

Condensation is the most notable feature of the Balboa-Enciso-Pedrarias accounts which follow, especially of the preparations at home for the departure of the last named as governor with an overhopeful following. We come to the narrative of Balboa's discovery of the Pacific.[22] The reviser omits Peter Martyr's prologue; adds a detail here and there, as that many Indians accompanied Balboa's 190 men, and that the natives wore leaves; omits a detail or so, such as some of the butchering of natives in battle, or a comment on the soft sound of the native language or on the probably Ethiopian origin of some enslaved Indians of black color; adds a comment on the wonder of finding sodomites among primitive savages. For Balboa's actual first sight of the ocean, the reviser extends and complicates the discoverer's reaction, but not very plausibly. Peter Martyr had given Balboa speeches at this critical moment which were rather above his station; the reviser adds another which is even less plausible, an address to "the South Sea, king of seas." Oviedo was to join also in this historian's game of inventing speeches, and it is idle to comment on any of them. The one substantive addition in the revised text is the statement that Balboa raised an immense cross above the cairns which he built on the summit of the peak in Darien. A similar addition to the account of the taking possession of the ocean is the statement that Balboa raised the flag of Castile at four places on the shore.

These are minor matters. The most substantial addition in all the 1534 text is found in the account of Balboa's penultimate exploit, his attempted ascent of the river called Grande, now the Atrato,

[22]Decade III, book i; *Historia*, foll. 51-55^{v} (Ramusio, III, 28-30).

from the gulf of Darien in search of the gold of Dabaiba. Peter Martyr had written only:

> Vasco and other captains had organized parties for the exploration of this region, and had embarked in boats of different sizes to ascend the river. For a distance of 40, 50, and even 60 miles they sailed without difficulty. But oh the great villainy! naked and unarmored savages attacked and defeated them, killing the majority and wounding all the rest. These natives use poisoned arrows in fighting. . . . They throw such volleys of lances in battle that the sun is obscured. . . . They also have swords of hardened wood. . . . Vasco himself was covered with wounds inflicted by them, and thus the river of Dabaiba was abandoned and left unexplored.[23]

Balboa's own account of this exploit is not much more revealing. His clearly reluctant report to the king, which Peter Martyr obviously did not use, is dated at the time on October 16, 1515, and reads:

> . . . I left here with 190 men for the province of Davaive, and we came to a village of a chief, and they fled when they heard us, and we took certain persons, and thence we went by land to the village of the cacique Davaive, and he likewise had fled, and they took there certain persons from whom we learned of the mines inland and of the gold of Davaive, and they were certain that great mines were within ten days' journey, where all the chiefs collect; we could not reach the chief to arrange to have him speak with me, though it was ten days [that we stayed] and we sent for him several times. . . .
>
> The reason why we left is that in all the land of Davaive we found nothing to eat for a whole month, because there had been many locusts which had destroyed the whole country; and as I wanted to go inland, I had to leave with the boats 60 or 70 men to guard them, and we had nothing to eat or anywhere to get food from. . . . We left there to ascend the Rio Grande to search for food in order to relieve the boats and thence go inland upstream. We learned that the great part of the people were in a province called Ibebeiva, and I went upstream to take a fishing village two days from there; and we went upstream, and Luis Carrillo went there in one canoe and I in another, and there were two other canoes; in all we were some 50 men; and it was our hazard to be attacked on the way by seven or eight Indian war canoes. And as the Christians were awkward in these canoes, especially those who were fresh from

[23]Decade IV, book x: I quote not the final version (1530) but the shorter earlier version, published as *De Nuper Repertis Insulis* (Basel, 1521), pp. 41-42.

Castile, the Indians used means which we could not avoid: they wounded 30 men, many with four or five wounds; they wounded me so badly in the head that I was in sufficient danger, but now I am well, thank God. And we had to leave the canoe in which we were, for we could never have got it to shore. That in which Luis Carrillo went with the other two did get to shore, and there they defended themselves; it pleased God that [the Indians] gave Luis Carrillo a thrust in the chest of which he died . . . and the two others also.[24]

Only in the *Historia*, it may now be said, is the story adequately and circumstantially told. Oviedo gives the event only one sentence (Book 29, ch. 10); neither Altolaguirre nor José Toribio Medina alludes to the 1534 account, trusting instead to Balboa's somewhat evasive letter. The *Historia* reads:

. . . having brought together 300 men with those of Darien, and embarking some in canoes and some in brigantines, they began to sail up that river. Where it flows into the gulf, it is 6 degrees north of the Equator. Going up 40 miles, they found on both sides great swamps of reeds and rushes of large size, and at night there were infinite numbers of bats and large mosquitoes which bit them. They saw afar some mountains, but could not get to them, being hindered by the swamps. Then they saw many trees like tallest palms. They met many canoes full of Indians armed with arrows and bows; when they saw us, they shot the arrows and then fled through channels in the swamps which were so narrow that we could not catch them. Then after 60 miles they found a great plain where the river made a lake, in which was an island full of high palm trees grown so close together that the Indians built their dwellings in them, laying logs across the branches and then binding them about with other logs and with leaves, so that they looked like covered balconies, each with woven creepers fixed to the trunk [like ladders] by which the Indians climbed up; all these scaffolds were joined so continuously and the trees were so thick that from a distance one could not tell if these were dwellings or only dense forest. Under these scaffolds were gathered some 4,000 Indians, all armed with bows and poisoned arrows, and with spears which they cast, on a leash, where they would. All this multitude of houses had a channel in the center which divided it into two parts; many of their canoes were moored there. Vasco Nunez being entered into this channel with all his company, they were assaulted

[24]Martín Fernández de Navarrete, *Colección de los Viages*, III, 375-85; repeated in José Toribio Medina, *Descubrimiento del Océano Pacífico*, II (Santiago de Chile, 1914), 139-45.

on every side by the Indians, and so many poisoned arrows were shot from before and behind [us] that they could not protect themselves with their shields; at the first volley more than 100 were wounded, who died. Vasco had been in so many encounters with Indians and always won that he could not endure this shame; disembarked on the bank with the rest, he lined them up as best he could in the thick trees, and they fired their pieces. The Indians heard the roar and saw the flash, and began to flee; but seeing that our men were trying to climb to the balconies where the wives and children were, the Indians like madmen began to attack within the dense trees, completely fearless of death; and they shot so many arrows and darts that the majority of those who had come ashore were wounded, and Vasco himself had two wounds, one in the face from a wooden sword which cut like iron, the other from a dart which pierced his right arm. Those who had remained in the brigantines were likewise mostly wounded by the Indians on the other side of the channel; at length the wounded Vasco and the other injured men were constrained to retreat as best they could to the barks, and thence downstream to reach Darien.[25]

[25] *Historia*, foll. 61v-62 (Ramusio, III, 33v-34). I give the Italian text:

. . . messi insieme 300 huomini con li detti del Darien, & montati parte sopra Canoe, & parte sopra brigantini, se misero a nauigare al contrario d'acqua su per il detto fiume. qual doue sbocca nel golfo sopradetto è gradi sei sopra l'Equinottiale. & andati per spatio di 40 miglia sempre trouauano da vna banda, & da laltra grandissimi paludi con canne, & giunchi che erano molti grossi. & la notte infiniti pipistrelli, & zanzare molto grandi che gli mordeuano. vedeuan ben di lontano alcuni monti, ma non vi poteuan andar, impediti dalli detti paludi. vedeuan anchora molti arbori simili à palme altissimi [sic]. incontroronsi in molte Canoe piene d'Indiani tutti armati di freccie, & archi, quali come vedeuan li nostri tirate le freccie, si metteuan a fuggire per alcuni canaletti di detti paludi, tanto stretti che era impossibile poterli giugnere. Pur dapoi fatti circa 60 miglia trouoron vna grande pianura, doue questo fiume faceua vn lago, nel quale era una Isola tutta piena di arbori di palme altissime, sopra lequali per esser nate vna appresso laltra, hauean fatte le sue habitationi l'Indiani, attrauersando legni da li rami d'una a laltra, & poi serrando alintorno con altri legni & fō [fol. 62] glie, tal che pareuan come palchi coperti, & ciascuno hauea certi legami di stroppe appiccati al tronco, per le quali vi montauano sopra, & tutti questi palchi eran tanto continui & appresso lun a laltro, per la densità de glarbori, che di lontano pareua cosa strana a vederli, percio non si poteua comprender se fussero habitationi, ouer boscho folto. Di sotto questi palchi erano adunati circa quattro mila Indiani tutti armati di archi & freccie venenate, & dardi lunghissimi, quali con vn certo legame appiccatoui tirauan oue voleuano. havea tutta questa moltitudine di case vn canale in mezzo, che la diuideua in due parti, doue erano legate molto dele loro Canoe. In questo canal essendo entrato Vasco Nunez, con tutti li compagni furon assaltati da ogni canto da detti Indiani, & gli furon tirate tante freccie venenate & dietro & dauanti, che non fu possibile di coprirsi tanto con li scudi, che non ne fusser feriti al primo tratto piu di 100 quali morirono. Vasco essendosi trouato in tante zuffe con Indiani, & in tutte riportatone vittoria, non volse patir questa vergogna, ma smontato sopra vna ripa con il resto si mise ad ordine, meglio che potette, per esser il sito tutto intricato di arbori,

This account again leaves something to be desired; but it is more detailed, and seems to come from an eyewitness. It should then be added to the Balboa documents. Possibly its source can be discovered.

With this item the interest of the 1534 version ceases, since the remaining episode of the judicial murder of Balboa, though it is expanded like earlier incidents from the Peter Martyr original, and adds detail and rhetoric, yields no greater substance. For the report of this event one may turn to Oviedo's full narrative, which was not, however, published until the nineteenth century.

The final value of the revision as revealed in this study is ambiguous. The condensing of Peter Martyr's text may have done it some harm in our eyes. The writing in of some apparently safe inferences of fact, like the use of instruments by Columbus, and the imagining of additional speeches for Columbus and Balboa, do not impress us now. The discovery of new factual material is to be welcomed, even though we have no indication where Navagero got it. Finally the insertion of latitudes and distances and other clarifications of fact, which we might ascribe to Ramusio, is a sign of intelligent editing, if not of a scrupulous concern for the original text—which was not then customary. Altogether, the revision may be deplored but not ignored.

& con gli schioppi comincio a salutarli. l'Indiani vdito lo strepito, & veduto il fuocho si misero a fuggire, ma vedendo, che li nostri voleuan montare sopra li palchi, doue eran lor mogli & figliuoli, come arrabiati fra quella densita di arbori vennero di nuouo ad assaltarli, non stimando la morte, & tirorono tante freccie, & dardi, che la maggior parte de li smontati furon feriti, & Vasco medesimo hebbe due ferite, vna sopra il viso da vna spada di legno, laqual tagliaua come se la fusse stata di ferro, l'altra fu d'vn dardo che li passo il braccio dritto.

Quelli che eran restati ne li brigantini da l'Indiani che eran da laltro canto del canale, furon similmente per la maggior parte feriti, tanto che finalmente Vasco ferito con li altri molto mal trattati, furon constretti meglio che potettero tornarsene à le barche, & a seconda del fiume andarsene al Darien.

A Revaluation of *Horestes* (1567)

By James E. Phillips

Historians of English drama are generally agreed as to the importance of John Pikeryng's *Horestes* in the development of Elizabethan tragedy. Tucker Brooke, for example, believes that this 1567 adaptation of the Orestes legend stands "at the highest point attained by the transitional interlude in the development of dramatic unity and tragic purpose."[1] Yet the historians have failed to agree on solutions to some of the basic problems that the play presents. They confess themselves frankly baffled as to the identity of the author named on the title page of the work. And they differ on such fundamental questions as whether the interlude was designed for a courtly audience or the popular theater, and whether it was intended to be simply a dramatization of the classical legend, or an allegory of events in the life of Mary Queen of Scots. A re-examination of the play in the light of contemporary English and Scottish political attitudes affords reasons for believing that *Horestes* was indeed designed to reflect at least those aspects of Mary's affairs in Scotland that were of particular concern to a learned English audience, and that the author was probably John Puckering, subsequently Speaker of the House and Lord Keeper in Elizabeth's government, and an ardent foe of Mary Stuart.

I. *The Problem*

The interlude survives in a crudely printed quarto, published in London by William Griffith in 1567, entitled *A Newe Enterlude of Vice Conteyninge, the Historye of Horestes with the cruell reuengment of his Fathers death, vpon his one naturtll Mother. by John*

[1]C. F. Tucker Brooke, *The Tudor Drama* (New York, 1911), p. 139. Cf. also A. Brandl, "Shakespeares Vorgänger," *Shakespeare Jahrbuch*, XXXV (1899), xvi; Carl Kipka, *Maria Stuart im drama der Weltliteratur* (Leipzig, 1907), pp. 10-14; F. Brie, "*Horestes* von John Pickeryng," *Englische Studien*, XLVI (1912), 66-72; Willard Farnham, *The Medieval Heritage of Elizabethan Tragedy* (Berkeley, 1936), pp. 258-62; A. P. Rossiter, *English Drama from Early Times to Elizabeth* (London, 1950), pp. 140-141.

Pikeryng.[2] Whether this is the play "of Orestes" performed at court between July 14, 1567, and March 3, 1567/8, is a matter of dispute. Fleay and Chambers are inclined to think that the two are the same, but Feuillerat and Cunliffe, among others, argue that a work so irregular and crude as, in many respects, the published play is, could not have been a court production.[3] In any event, the printed version of the play was apparently intended for performance in London, for the Lord Mayor is included in the prayer for Elizabeth and all the nobility with which the work concludes.

The main action of the interlude, which is liberally interspersed with such native elements as a Vice, low comedy rustics, and personified abstractions, dramatizes the classical story of Orestes' revenge on his mother Clytemnestra and her paramour Egisthus for their murder of Agamemnon, Orestes' father. At the outset of the play, Horestes (as the dramatist spells the hero's name) hesitates at the idea of killing his mother to avenge his father's death. Nature pleads with him, on the basis of pity and mother-love, to spare Clytemnestra. But the gods, the Mycenaean Council, and Idomeneus, who appears here as an elder statesman named Idumeus, in turn persuade him of the political necessity, the legality, and the morality of his obligation to avenge the murder. Thus convinced, Horestes defeats Clytemnestra and Egisthus in battle, remains unmoved by his mother's appeals to pity and mercy, and sends her off with her paramour to execution. When Menelaus arrives to avenge in turn the death of his sister Clytemnestra, Horestes convinces him that the deed was made necessary by command of the gods and by all the laws of nature and of nations. Truth and Duty thereupon crown Horestes as rightful king, while Nobles and Commons joyfully express their approbation of his actions.

Most readers of the play have not failed to notice the striking parallels between the situation dramatized in *Horestes* and the sensational events that were taking place in Scotland in the very year

[2]References are to facsimile reprint in *Old English Drama, Students' Facsimile Edition* (Tudor Facsimile Texts), ed. J. S. Farmer (1910).

[3]Cf. E. K. Chambers, *The Elizabethan Stage* (Oxford, 1945), III, 466; *Documents Relating to the Office of the Revels in the Time of Queen Elizabeth*, ed. A. Feuillerat (Louvain, 1908), p. 449; J. W. Cunliffe, *Early English Classical Tragedies* (Oxford, 1912), pp. lxix-lxx.

in which the play was printed. On February 9, 1567, Henry Lord Darnley, the second husband of Mary Queen of Scots and father of her infant son James, was strangled and blown up under circumstances that seemed to implicate Mary herself in the crime. On May 15, the Scottish Queen married the Earl of Bothwell, the man widely held at the time to be the murderer of Darnley. It was asserted in both Scotland and England that the Queen herself had been an accomplice in the murder in order to wed her alleged paramour and join him with her in the government. Such feelings against the Queen came to a head on June 15, when forces under Scottish Protestant lords defeated those of Mary and Bothwell at the Battle of Carberry Hill. Bothwell fled to Denmark, where he subsequently died, and Mary was imprisoned in Lochleven Castle. On July 29, while still a prisoner, Mary was persuaded or forced to abdicate her throne in favor of her year-old son, who thereupon became James VI of Scotland under the regency of Mary's Protestant half-brother, the Earl of Murray. So matters rested through the end of the year.

In view of the coincidence of these events and the publication of *Horestes* in the same year, students of the play have found it tempting to suggest identification of the defunct Agamemnon as Darnley, the adulterous Clytemnestra as Mary Stuart, and the murderous Egisthus as Bothwell. These and other parallels were most fully worked out some years ago by Carl Kipka in his study of the Scottish Queen in world drama. But such efforts to equate the characters and actions of the play with specific persons and events in Scotland have inevitably run headlong into difficulties—the major one being the necessity for identifying the mature and promptly married Horestes as either Mary's one-year-old son, or her already-married half-brother, the Regent Murray. Accordingly, most of the commentators have been content simply to note the parallels as curious coincidences, or, like Kipka, as at best occasional and incidental glances at contemporary affairs in Scotland.

I should like to suggest that these parallels are neither incidental nor coincidental, but are rather evidence of the playwright's controlling purpose in his rehandling of the classical legend—namely, to dramatize the arguments that justify in principle the deposing of a

sovereign queen. That is to suggest that he was not attempting to allegorize the actual events taking place in Scotland, as most critics have assumed, but instead was setting forth in dramatic terms the fundamental question of political theory and practice which news of these events raised in England, where a queen highly sensitive about her own sovereignty was on the throne. Broadly speaking, he was attempting to demonstrate, I believe, the circumstances under which one queen might properly be deposed without violating the principle of royal sovereignty everywhere. In this respect it seems to me that *Horestes* might be considered as a classical "history play" in the sense that Professor Lily B. Campbell has recently shown Shakespeare's English history plays to be—that is, a "mirror" serving a "special purpose in elucidating a political problem of Elizabeth's day and . . . bringing to bear upon this problem the accepted political philosophy of the Tudors."[4] In the following pages, a survey of opinion on both sides of the border during 1567 will show that in so far as the sensational events in Scotland were concerned, interest at this time centered on the political problem of deposing an anointed queen. And a re-examination of *Horestes* will indicate that the author deliberately reshaped and developed his materials to elucidate this central problem and to bring to bear upon it a political philosophy acceptable to a Tudor queen.

II. *The Circumstances*

The imprisonment of Mary, and her abdication under pressure, presented Protestants in England with something of a dilemma. In short, they approved the practice but deplored the principle of dethroning and imprisoning a sovereign queen. Their attitude may be adequately represented by the attitude of Elizabeth herself. On the one hand, as Conyers Read observes, "events in Scotland had gone very much to her taste. The policy [of flirting with France and Spain] which Mary had been attempting to carry out had been subversive of Elizabeth's interests, and the Protestant lords, rebels though they were, had rendered her a great service in preventing its success."[5] On the other hand, Elizabeth subscribed, as did most of

[4]Lily B. Campbell, *Shakespeare's "Histories"* (San Marino, Calif., 1947), p. 125.

[5]Conyers Read, *Mr. Secretary Walsingham and the Policy of Queen Elizabeth* (Cambridge, Mass., 1925), I, 47.

her loyal subjects, to the political doctrine of royal absolutism, according to which any sovereign was considered to be God's anointed representative; a monarch was held to be punishable only by God, and rebellion by subjects of any degree was condemned as mortal sin.[6] On the basis of this doctrine, Elizabeth, as Read also points out, "disapproved of the course which Mary's subjects had taken. It was contrary to her whole notion of sovereignty to recognize any right in subjects to resist lawfully constituted authority."[7] In this vein, Elizabeth wrote of the Protestant lords who had imprisoned Mary that "They have no warrant nor authority by the law of God or man to be as superiors, judges or vindicators over their prince and sovereign, howsoever they do gather or conceive matter of disorder against her."[8] Although Elizabeth inevitably turned, as Neale puts it, from political theory to political sense and proceeded in fact to support the rebel lords in Scotland, she nevertheless continued her loud protests against what she regarded in principle as a violation of royal sovereignty.[9] The theoretical issue of deposing a queen, therefore, remained an important, if not a determining factor in the English response to affairs in Scotland in 1567.

To meet the issue, the Scottish rebels and their partisans in England expounded the doctrine that while rulers are indeed responsible only to God, He for that very reason will sometimes raise up instruments to punish those of His anointed deputies who are guilty of gross immorality and misconduct. Sir Walter Mildmay probably had in mind such justification of the treatment of Queen Mary when he wrote to Cecil shortly after the abdication that "The marvellous tragedy which has occurred there shews the end of those who do not live in the fear of God."[10] Nicholas Throckmorton, the English ambassador, wrote at the same time to Elizabeth herself that "It is a public speech among all the people, that their queen hath no more liberty nor privilege to commit murder nor

[6]For a complete account of this doctrine, see J. W. Allen, *A History of Political Thought in the Sixteenth Century* (London, 1928), pp. 121-68.

[7]*Mr. Secretary Walsingham*, I, 47.

[8]Quoted in J. E. Neale, *Queen Elizabeth* (New York, 1934), p. 158.

[9]Ibid., pp. 159-60.

[10]*Cal. State Papers, Domestic, 1547-80*, p. 296.

adultery, than any other private person, neither by god's laws, nor the laws of the realm."[11] And Cecil probably employed similar arguments when he reasoned with Elizabeth so effectively in behalf of the Scottish lords at this crucial period that "her Majesty began to pause."[12]

These arguments justifying the Scottish rebels as God's instruments to punish a queen were most fully set forth, however, in a series of broadside ballads published in Scotland in the middle months of 1567 and apparently circulated almost simultaneously in England.[13] Most of the ballads were written by Robert Sempill, a virulent supporter of the Protestant cause in Scotland, with the avowed purpose of justifying the action against Mary. To this end, the broadsides provided luridly full accounts of the Queen's alleged misconduct, and documented exposition of how God's justice operates to punish anointed but erring rulers.

Typical of these propagandistic ballads in tone and argument is Sempill's *Ane Declaratioun of the Lordis iust quarrell*, published in Edinburgh immediately following Mary's abdication.[14] The ballad is written in the form of a dialogue between Erideilus, who like Elizabeth questions the right of a subject people to punish, imprison, or depose a sovereign ruler, and Philandrius, who like the Scottish lords explains the circumstances under which such things can be done. Kings, says Philandrius, were originally ordained by God to be elected by the will of the people, and thus the final authority in a state rests with the people themselves. When a ruler abuses the authority which is only delegated to him by God through the people, then God empowers the people to remove the ruler and put another in his place. The occasion for the exercise of this sovereign right of the people, Philandrius continues, is any action on the part of the ruler which endangers the good reputation of the realm or

[11]Quoted in M. Mignet, *Histoire de Marie Stuart* (Paris, 1852), I, 385, n. 1.

[12]Cecil to Throckmorton, August 11, 1567, *SP Scotland 1509-1603*, II, 844.

[13]The Scottish ballads of 1567 are reprinted, with an account of their circumstances, in *Satirical Poems of the Time of the Reformation*, ed. James Cranstoun (Edinburgh, 1890), I, 30-67. The following references are to this edition. On the circulation of the ballads in England, cf. J. G. Dalyell, *Scotish Poems of the XVI Century* (Edinburgh, 1801), p. vi; see also the listing of the ballads in *SP Scotland 1509-1603*, I, 246, 248, 258.

[14]*Satirical Poems*, I, 57.

interferes with the administration of God's justice. Since murder and adultery are obviously actions that have such effects, he argues, the people of Scotland had no alternative but to withdraw their authority from Mary, who he says is guilty of these and worse crimes, and give it to her son. And so they have done. In this way, Philandrius concludes, God has brought His judgment and His punishment against a wicked ruler. Eridelius, who had protested against the rebellious action, is so overwhelmed by these arguments that "he waxit reid for schame and walks away," much as Cecil's exposition of a similar argument caused Elizabeth to "pause."

It is important to note, with reference to *Horestes*, that two other ballads published at this time not only present the same theoretical justification for deposing Mary Stuart, but specifically cite the case of Clytemnestra as a precedent for deposing and punishing a queen accused of adultery and murder. With characteristic confusion of biblical and classical authority, one of these–*The Nobill and Gude inclination of our King*–identifies Mary with Clytemnestra and concludes that God will raise a Joshua to wreak His vengeance on the sinful Queen of Scots. The ballad entitled *The testament and tragedie of umquhile King Henrie Stewart* similarly justifies the deposing of Mary by the example of Clytemnestra, who "for Egistus face . . . Hir husband, slew: so vyle was hir usage."[15] Both ballads, however, like others on the subject, make it clear that the avenging Orestes or Joshua was certainly not visualized in the infant James. *Ane Exhortatioun to the Lordis* and *Ane Exhortatioun to my Lord Regent*, together with Sempill's *Declaratioun*, insist that the Protestant lords of Scotland, headed by the Regent Murray, are instruments raised up by God to punish a queen whose guilt is painted by the balladist in the darkest colors.

Although these ballads were mainly designed by Scots for Scottish consumption, the fact that they were sent at once to London, together with the fact of Elizabeth's recorded concern with the violation of her favorite political theory, testifies to the preoccupa-

[15]Ibid., I, 31, 39. George Buchanan made the same identification of Mary and Clytemnestra ten years later in a letter to the Englishman Daniel Rogers, a fact which points to the prevalence of the identification at least in Protestant circles (Buchanan, *Opera Omnia* [1725], II, 727).

tion in England and Scotland alike with the rights and wrongs of deposing a sovereign queen. Just at this point *Horestes* was published in London, and very possibly produced at the court there. In the light of the English concern with the Scottish problem—a concern that on two occasions, at least, cited Clytemnestra as a case in point—the dramatist's adaptation of the legend of Clytemnestra and Orestes reveals the characteristic features of a "mirror" designed to reflect and elucidate the fundamental political doctrine that underlay the events taking place north of the border in 1567.

This impression of *Horestes* as a political "mirror" is strengthened at the outset when the playwright's extensive and apparently purposeful alterations of his source material are taken into account. Some years ago Professor Brie demonstrated conclusively that the dramatist followed the version of the Orestes story found in Caxton's *Recuyell of the Historyes of Troye*.[16] But Brie made no effort to explain the numerous and major changes which he observed that the dramatist had introduced. In view of contemporary use of the legend as one precedent for punishing Mary Stuart, the playwright's rehandling of Caxton's account suggests a deliberate effort to cut the classical cloth to the pattern of Scottish political problems as they were regarded in England at the time.

Generally speaking, Caxton's rather simple account of a son who is ordained by fate to avenge his father's death is transformed into a drama in which the central characters spend an undramatic amount of time discussing all phases of the problem of deposing and punishing a queen. As Brie notes, the interlude shifts the criminal responsibility for the murder of Agamemnon from Egisthus, upon whom Caxton placed it, to Clytemnestra herself, who is portrayed in the play as the chief instigator of the murder as well as an adulteress. The command of the gods to Orestes is changed from the pagan decree of fate described by Caxton to an injunction that divine justice, in the Christian sense, be wreaked upon a royal wrong-doer. And to this divine justification for vengeance on a queen, the dramatist appends lengthy legal arguments to the same effect, and extended expressions of approval by the Nobles and the Commons of the realm.

[16] *Englische Studien*, XLVI (1912), 66-72.

As a result of changes of this type, the interlude consistently gives expression to issues and arguments characteristic of the effort in 1567 to justify the deposing of Mary. The critical question in dealing with Clytemnestra, as with Mary, is stated by Horestes at the outset of the play when he ponders the conflicting demands of loyalty and justice, of pity and vengeance. Such was the conflict apparently in Elizabeth's mind when she addressed Mary as a "sister" on July 27, after the Scottish Queen's imprisonment, deploring the action taken against a royal kinswoman and sovereign.[17] A similar appeal to loyalty and pity was the basis of Eridelus' defense of Mary in *Ane Declaratioun of the Lordis iust quarrell*.[18] In a passage added to Caxton, Horestes in the play raises the same question when he says:

> To caull to minde the crabyd rage of mothers yll attempt
> Prouokes me now all pyttie quight, from me to be exempt.
> Yet lo dame nature tries me that, I must with willing mind
> Forgiue the faute and to pytie, some what to be inclynd [Aiv^{v}].

The bulk of the play that follows this speech sets forth the legal and philosophical arguments—all additions to Caxton's original, as Brie has noted—justifying the vengeance that Horestes feels compelled to take. First, the hero receives assurance that punishment of Clytemnestra for her sins is the will of the gods, very much as the Protestant lords of Scotland were assured by Sempill that "God hes to zow power lent" to "Tak Godis quarrell als in hand, / And purge vs from Ipocrasie."[19] But still uncertain as to his proper course, Horestes consults the elder statesman Idumeus and the Council of Mycenae as to the legality of proceeding against the queen. Idumeus explains that such vengeance is required for the future security of the realm. And just as the balladist Sempill told the Protestant lords in Scotland that they must make an example of Mary "and shaw / . . . That sinners shortlie may be shent,"[20] so the Council tells

[17] Mignet, *Histoire de Marie Stuart*, I, 393-95.

[18] *Satirical Poems*, I, 58, 60.

[19] *Ane Exhortatioun to the Lordis*, in *Satirical Poems*, I, 48, 49.

[20] Ibid., I, 48.

Horestes that vengeance on Clytemnestra shall "be a feare to those, / That to the lyke at anye time, their cruell mindes dispose" (Bii[r]). The Council in the interlude concludes that "reuengment ought to be . . . least others be infecte, with that, that they shall se / Their princes do" (Cii[r]). Like the balladist, who argued that Mary Stuart should be deposed "Rather than lat ane haill countrie decay,"[21] the Council feels that a wicked sovereign like Clytemnestra can infect a whole kingdom, and therefore cannot be tolerated:

> For lo the unyuersaull scole, of all the world we knowe,
> Is once the pallace of a kinge, where vyces chefe do flow.
> And as to waters from on head, and fountayne oft do spring,
> So vyce and vertue oft do flo, from pallace of a kinge.
> Whereby the people seing that, the kinge adycte to be,
> To prosecute the lyke, they all do labor as we se.
> Therefore the gods have wylled thus, Horestes for to take,
> His iorney and a recompence, for fatheres death to make [Cii[r]].

Armed with arguments and justifications such as these for taking action against the queen, Horestes is able to answer Nature, a personification in the play who appeals to him to spare his mother in the name of pity, and to avoid the charge of tyranny that violation of sovereign authority would bring against him. Horestes says to Nature:

> Who offendith ye loue of god, & eke mans loue wt willing hart
> Must by yt loue haue punnishment, as dutey due for his desart
> For me therfor to puñish hear, as law of gods & man doth wil
> Is not a crime though yt I do, as thou dost saie my mother kil. . . .
> Pythagoras doth thincke it lo no tyraney to be,
> When that iustyse is mynestryd, as lawe and godes decree.
> If that the law doth her condemne, as worthy death to haue,
> Oh nature woulst thou wil yt I, her life should seme to saue?
> To saue her lyfe whom law doth slay, is not iustise to do.
> Therefore I saye I wyll not yeld, they hestes to com unto [Biiii[v]].

When Horestes finally confronts Clytemnestra herself, he is thus well prepared with legal and moral arguments to resist her sentimental pleas and to justify the punishment he is about to decree for

[21] *Ane Declaratioun of the Lordis iust quarrell*, in *Satirical Poems*, I, 62.

her. The confrontation scene in the play differs significantly from the meeting of Orestes and his mother in Caxton's account. In the source, Orestes, "assone as he saw her he ran upon her with his naked sword and cut off her two pappes and after slewe her with his hands."[22] But the playwright-adapter, rejecting this crude violence, makes the meeting the occasion for still another speech by Horestes on the legality, the justice, and the divine authority of his vengeance before he sends Clytemnestra off stage to the execution:

> Wherefore the poete Iuuenal, doth thinke it for the beste:
> That those that lyue lycentiousley, should brydled be wt payne
> And so others that elles would syn, therby they might restrain
> For thus he sayeth that Cities are, well gouerned in dede,
> Where punnishment for wycked ones, by lawe is so decrede.
> And not decrede but exersyesd, in punnyshinge of those,
> Which law ne pain fro waloing still, in vice their mind
> dispose [Dii^{v}].

All of these political, legal, and moral arguments are repeated in the play when Menelaus arrives, intent on avenging Clytemnestra. He is so overwhelmed by the force of Horestes' reasons, and those of Idumeus and the Council, that he gives his daughter Hermione in marriage to her cousin, the hero of the play. In this connection it is worth noting that the episode, although not an addition to Caxton's account, nevertheless provides in its expanded form a remarkable parallel to the protests lodged in 1567 by Mary Stuart's brother-in-law, Charles IX of France, against the treatment accorded his sister by the Scottish rebels. Like Menelaus, Charles similarly failed to press his complaints when he was made to see the political reasonableness of the Scottish actions which Elizabeth supported.[23] There is no record, of course, that Charles had a daughter to give in marriage either to the infant James or to the already married Regent Murray as a token of his faith. Such circumstances, like the execution of Clytemnestra, simply point up the dramatist's intention to mirror the basic political problem rather than the actual details of events in Scotland.

[22] *The Recuyell of the Historyes of Troye*, ed. H. O. Sommer (London, 1894), p. 685.

[23] Cf. Mignet, *Histoire de Marie Stuart*, I, 348-49, and T. F. Henderson, *Mary Queen of Scots* (London, 1925), II, 476.

Further confirmation of the justice of Horestes' action in the play comes from the Nobles and the Commons of the realm when they hail him as their rightful king. While no such scene appears in Caxton, at least two of the Scottish ballads of 1567 argue that the welfare of nobles, laborers, and subjects of every degree demands the punishment and removal of Mary.[24] Similarly, the Nobles in the play exclaim:

> Most regall Prynce we now are voyd, of mortall wars beratio
> And through your grace we ar ioyned, in love wt euery nation
> So yt your nobelles may now lyue, in pleasaunt state sartaine,
> Deuoyd of wars & ciuill stryfes, whyle yt your grace doth
> raine . . . [Eiii^{v}].

The Commons enthusiastically agree that

> Where as such on as you do raine, there nedes must riches gro
> We are o king easyd of the yoke, which we have so desiard [Eiii^{v}].

Finally, the moral point and political purpose of the play are explicitly stated at the end in an Epilogue spoken by Truth, who is made to say:

> He that leadeth his lyfe, as his phansey doth lyke,
> Though for a whyle, the same he maye hyde:
> Yee Truth, the daughter of Tyme, wyll it seke,
> And so in a tyme, it wyll be discryde.
> Yet in such tyme as it can not, be denyed?
> But receaue dew punnishment as god shall se.
> For the faute commytted, most conuenient to be.
> As this storye here hath, made open unto ye,
> Which yf it haue byn marked, much prophet may aryse?
> For as Truth sayth, nothinges wryten be,
> But for our learninge, in anye kynde of wyse [Eiiii^{r}].

We need scarcely be told by Truth that this play was written for the "learning" of an Elizabethan audience aware of the dilemma created by the imprisonment and abdication of an anointed sovereign. In the additions which he makes to Caxton's original, the dramatist clearly reveals his intention to mirror and elucidate the basic political problem of the deposition in Scotland without regard

[24] *Ane Exhortatioun to the Lordis,* and *Ane Exhortatioun derect to my Lord Regent,* in *Satirical Poems,* I, 46, 52.

for such historical details as the single blessedness of the infant James and the imprisonment, rather than execution, of Mary.

This preoccupation with the legal and theoretical aspects of the Scottish problem in *Horestes* lends support to E. K. Chambers' contention, in *The Elizabethan Stage*, that the published play is probably identical with that presented at court late in 1567. Granting the crudities of style and construction which led Feuillerat and Cunliffe to doubt that such a piece could have been intended for a courtly audience, nevertheless it seems unlikely that a work so concerned with the abstract issues of deposition as *Horestes* is could be designed for any but an audience immediately aware of the current political situation in Scotland. As Rossiter says of the play in relation to its numerous classical references, this is "no mere 'popular stage' hack stuff." Nor would the "elucidation" of the Scottish problem in *Horestes* necessarily have been offensive to Elizabeth, prejudiced as she is well known to have been against Calvinistic doctrines of popular sovereignty. For like all the Tudors, Elizabeth was willing in practice to concede that God will occasionally call up a special instrument to inflict His punishment on an erring monarch.[25] The calling-up of her own grandfather, Henry VII, to remove the erring Richard III, was an inescapable case in point. Torn as she was between theoretical disapproval and practical approval of the actions of the Scottish rebels, Elizabeth probably would have regarded *Horestes*, if she saw it, as an acceptable way out of the Tudor dilemma. For the dramatist, in departing from his sources to give special emphasis to the argument that Horestes was an instrument of divine justice against Clytemnestra, had blessed the particular efforts of the Scottish rebels without condoning rebellion in general.

III. *The Authorship*

If the foregoing interpretation of the occasion and purpose of the play is correct, new light can be thrown on the perplexing problem of authorship. Efforts to identify John Pikeryng, the author named on the title page, with any one of a dozen men of the same name active in England at the time have proved futile.

[25]Cf. Neale, *Queen Elizabeth*, pp. 195-96.

Faced by this blank, Carl Kipka suggested in a cautious footnote that perhaps John Pikeryng should be identified as John Puckering, Speaker of the House of Commons in 1584 and 1586, and Lord Keeper in Elizabeth's Privy Council from 1592, when he was knighted, until his death in 1596.[26] Kipka did not pursue this suggestion, but simply concluded that while he knew of nothing to support the identification, neither did he know of anything that argued against it. A brief review of Sir John Puckering's career in the light of what we have just seen about the nature and circumstances of the play of *Horestes* suggests evidence which, although by no means conclusive, at least strengthens the element of probability in Kipka's conjecture.

At the outset it should be noted that the alternate spellings, "Pikeryng" (or "Pickering," "Pyckering," etc.) and "Puckering" (or "Pukeryng," "Puckerynge," etc.) of the same family name are not uncommon in the printed and manuscript records of the sixteenth century. The indices of the Historical Manuscripts Commission's reports, for example, often provide a cross reference from one spelling to the other. In another official record, Sir John Puckering's widow was referred to in 1600/1 as "the Lady Pickerringe."[27] At an earlier date, Sir John's name itself had been similarly spelled, or misspelled, in a scurrilous anti-English poem published when Mary Queen of Scots was executed in 1587. The poet, a Scottish Jesuit named William Crichton, listed the "favorites" whom he accused of having seduced Elizabeth, both physically and politically, into agreeing to the death of Mary. Since John Puckering's role as one of Mary Stuart's archfoes among Elizabeth's advisers was widely recognized at the time, Crichton's reference to him as the first seducer is unmistakable despite the characteristic misspelling of his name:

> Picquerinus primas partes sibi vindicat, eius
> Qui raptae spolium virginitatis habet.[28]

[26] *Maria Stuart im drama der Weltliteratur*, p. 14, n. 1.

[27] *Hertford County Records: Sessions Rolls, 1581-1698*, I, 32.

[28] G[uliemus] C[richton] S[cotus], "De Lupae Anglicae Subactoribus Epigramma," in *De Iezabelis Angliae Parricidio varii generis Poemata Latina et Gallica* (Paris?, 1587?), sig. Diiv (Folger Library copy). On Puckering's widely advertised role in the prosecution of Mary, see below.

If William Griffith, the printer of *Horestes*, did in fact shift the spelling of the author's name from Puckering to Pikeryng, he was clearly not the only one in Elizabethan England who did so.

Furthermore, the authorship of the interlude by John Puckering would be perfectly consistent with both the chronology and the character of his career. Born in 1544, the son of William Puckering of Flambrough in Yorkshire, John was admitted as a student at Lincoln's Inn in 1559 and was called to the bar there in January, 1567.[29] *Horestes* was apparently written, and certainly published at the end of that same year, when John Puckering was twenty-three. It is not inconceivable that just as *Gorboduc* was written, in part at least, by a young lawyer-poet at the Inner Temple, so this inferior drama was written by an inferior young lawyer-poet at Lincoln's Inn.

In fact, the number of legal arguments and references in *Horestes* strongly suggests that the author was indeed interested and trained in the law, as was John Puckering. The legal element in the play includes, as we have seen, frequent mention of the Law of God, the Law of Nature, and the Law of Man and Nations; a brief discussion of the relative force and authority of these three kinds of law; and an argument based on a technically drawn distinction between the theories of law as decreed, and the practicalities of law as exercised. Moreover, Horestes and those who support his cause against Clytemnestra are all thoroughly familiar with the abstract theories of kingship and government that justify their cause. Finally, the fact that these elements of law and political theory in the play are additions to the source material in Caxton confirms the impression that the dramatist was a man with legal background and interests like John Puckering.

Further circumstantial evidence in support of claims for Puckering's authorship of the play is provided by the apparent connection between *Horestes* and Mary Stuart. During both his residence at Lincoln's Inn in the 1560's, and his later tenure as Speaker of the House, Puckering was associated with vigorous denouncements of the Queen of Scots, including, at the later date, demands for her immediate execution.

[29] *DNB*, s.v. "Puckering, John."

Lincoln's Inn, where Puckering completed his legal training in 1567, had been a focal point of international controversy over Mary Stuart as recently as the preceding year, even before the Darnley murder and the Bothwell marriage brought matters to a head.[30] In 1566 the Scottish Queen and her chief ministers complained bitterly to Elizabeth against "the late discourse in Lincoln's Inn" which they considered particularly offensive to Mary. The nature of this offensive "discourse" is not indicated in the records; probably it dealt with Mary's often reiterated claims to the succession in England which were being violently attacked in the English Parliament at just this time. Elizabeth apparently took some kind of disciplinary action against the alleged offenders, for in November, 1566, Mary herself and her councillors Maitland and Murray wrote separately to Cecil, thanking him "for the reparations of that which seemed prejudicial" to the Queen of Scots in the "late discourse." Whatever the nature of the discourse, the fact remains that Lincoln's Inn was a center of anti-Marian feeling and expression just a few months before John Puckering was called to the bar there, and less than a year before *Horestes* was published in London.

Moreover, if *Horestes* is indeed an anti-Marian play, as I have suggested, its arguments are completely consistent with those which fifteen to twenty years later made John Puckering one of England's most active proponents of capital punishment for the Queen of Scots. Of course, this agreement between the anti-Marian arguments dramatized in 1567 and those expounded two decades later by Puckering could well be a coincidence easily explained by the strong feelings against the Queen of Scots that prevailed in England for more than twenty years. But the uniqueness of the particular arguments in this case, viewed in the light of other links between *Horestes* and Puckering, make the coincidence worth consideration despite the time lapse.

Puckering's reputation as an Elizabethan public servant rests mainly on his activities as a foe of the Queen of Scots. As we have seen, the contemporary Jesuit poet William Crichton regarded

[30]The documents pertaining to this affair are recorded in *SP Foreign 1566-68*, pp. 148-49. Cf. also Neale, *Queen Elizabeth*, p. 146, on the succession question which probably underlay the episode.

Puckering as a principal abettor in Elizabeth's campaign against Mary. In 1584, as Elizabeth's Sergeant, Puckering tried and committed Dr. William Parry for plotting against the English Queen in behalf of the Queen of Scots. In 1586, Puckering was one of those who labored to implicate Mary in Antony Babington's conspiracy in the same cause.[31] Puckering's arguments against Mary were most fully set forth in two addresses which, as Speaker, he presented before Elizabeth in November, 1586, a scant three months before the Scottish Queen's death on the block.[32] In these speeches Puckering eloquently marshaled all of the arguments in favor of the immediate execution of Mary. On the first occasion he summarized the danger which she constituted against the person of Elizabeth, the maintenance of true religion, and the safety of the realm. On the second occasion, he considered and rejected in turn four alternatives to the execution of the Scottish Queen, namely: converting her, increasing her guard, holding hostages against her good behavior, and banishing her from the realm.

But most noteworthy in Puckering's case against Mary is his final emphasis on exactly the same argument to justify the punishment of a sovereign queen set forth by the author of *Horestes*, and by very few others during the intervening years. Puckering insisted to Queen Elizabeth that God had ordained her to execute His justice against an evil and erring ruler, adding that God would punish the English Queen if she failed to do so. In his first oration, for example, Puckering reminded Elizabeth of the Scriptural examples which revealed God's displeasure with those sovereigns who failed to carry out His justice—who were, in fact, "by the iust iudgement of God depriued of their kingdoms, for sparing those wicked Princes, whome God had deliuered into their handes of purpose to be slaine by them, as ministers of his eternal and diuine iustice."[33] Similarly Horestes, in the 1567 interlude, had acknowledged the compelling nature of an injunction from the gods, "Whose heastes

[31] *DNB*, s.v. "Puckering."

[32] The two speeches were published at the time, together with other material against Mary, in *The Copie of a Letter . . . to the Earle of Leycester* (London, 1586), ed. "R. C." (probably Richard Crompton). *STC* 6052.

[33] *The Copie of a Letter* (1586), p. 10.

no man dare once refuse," to execute justice on an offending queen (Ei^{r}). And as he prepared for battle against his royal mother and her paramour, Horestes received support from the Mycenaean Council in his view that the gods willed this revenge in order to exemplify the punishment that is inevitably visited on erring sovereigns (Cii^{r}). Thus in both the interlude and the oration it is the unanswerable logic of divine decree that is made the final justification for deposing and punishing an anointed queen such as Mary herself and her supporters claimed her to be.

While the similarities between the anti-Marian arguments in *Horestes* and the later utterances of Puckering may be pure coincidence, they nonetheless strengthen the circumstantial case for Sir John's authorship of the play. More important, perhaps, these similarities point up the anti-Marian theme and context of the play itself. For, regardless of authorship, the striking parallels between the arguments for executing a queen advanced by Mary's archfoe, and those set forth in "mirror" fashion in *Horestes*, are parallels that tend to place the dramatic interlude in its proper historical light. If the play, as Tucker Brooke says, is indeed "the highest point attained by the transitional interlude in the development of dramatic unity and tragic purpose," then perhaps it is well to be reminded of the political issues that controlled this achievement that in turn helped to shape the future of English historical and tragic drama.

Cornelis Drebbel and Salomon de Caus: Two Jacobean Models for Salomon's House

By Rosalie L. Colie

According to Spedding's conjecture, Francis Bacon wrote the *New Atlantis* in 1624 as a parable to his whole philosophy, a discussion of the "particulars," as he called them, by which all men might understand his pragmatic plan and adapt it to their future uses. As utopias go, the *New Atlantis* offered no extraordinary contributions to the political or social sciences, but it had the effect upon men's minds Bacon intended—and a more practical effect than most utopian schemes: Salomon's House, the academy for the advancement of learning, was the matrix stamped upon the great scientific academies of the seventeenth century, the French Académie des Sciences as well as the English Royal Society.[1] His academy was Bacon's principal instrument in the Great Instauration, the means by which the real work of the scientific revolution was to be carried out. His boast for it was brave, but no braver than his vision required: "the End of our Foundation is the knowledge of Causes, and secret motions of things; and the enlarging of the bounds of Human Empire, to the effecting of all things possible."[2]

Perhaps, as one critic has suggested, Bacon might never have written the *New Atlantis* had not Tommaso Campanella published his *Civitas Solis* in 1623 and thus inspired the Chancellor to a

[1]For the importance of Bacon's influence upon the Royal Society, see Thomas Sprat, *History of the Royal Society* (London, 1667), where the Instaurator's plan is closely related to the original plan of the Royal Society. R. F. Jones, *Ancients and Moderns* (St. Louis, 1936), deals with Bacon's pervasive influence upon the whole century. In outlining his scheme for a French scientific academy, the distinguished scientist Christiaan Huygens, referred to Bacon's academy as a model: "La principale occupation de cette Assemblée et la plus utile doibt estre, à mon avis, de travailler à l'histoire naturelle à peu près suivant le dessein de Verulamius. Cette histoire consiste en expériences et en remarques de tout ce qu'on voit dans la nature." (*Oeuvres complètes de Christiaan Huygens*, 22 vols. [La Haye, 1888-1950], VI, 95-96).

[2]Francis Bacon, *Works*, ed. James Spedding, Robert Leslie Ellis and Douglas Denon Heath (London, 1889-1892). All quotations from the *New Atlantis* occur in Vol. I, between pp. 129 and 166.

description of his own republic.[3] Whatever impetus Campanella afforded, however, his little book with its Platonic academy did not provide the closest original for Salomon's House; for that foundation Bacon had actual non-literary sources closer at hand. As his notes and jottings plainly indicate, Bacon, the practical man, drew upon experience whenever possible; his whole life long he was busy about the "particulars" of natural science, collecting for his "histories," looking for models for his foundation. He followed his own precepts as he laid them down and did not look merely in books. As early as 1608, he jotted down notes on actual models for his ideal "Foundac. of a college for Inventors"—"Westminster, Eton, Wynchester, Spec. Trinity College in Cambridg. St Jhons in Camb. Maudlin College in Oxford." These traditional institutions, however excellent for their own purposes, proved insufficient for Bacon's great innovating ideal; his academy had to have real laboratories for inventors and projectors, not only "a Library and an Inginary" but also "Vaults, fornaces, Tarraces for Isolacion; woork houses of all sorts."[4] As we know, no academy, real or imaginary, existed to provide Bacon with models for this ideal, but in London itself two men were practicing, in circles not far distant from Bacon's own, the "particulars" of natural philosophy in ways necessarily interesting to him. It is to their experiments, often startlingly close to those of Bacon's utopia, that we must look for a partial source of the *New Atlantis*.[5]

In all Europe there were few scientific laboratories at this period. The most famous, and undoubtedly the best, was Tycho Brahe's Uraniborg, a training-point for young astronomers and scientists from all parts of the continent. Another famous "academy" was at Prague, to which for a time the Emperor Rudolph II managed to

[3]Eleanor Dickinson Blodgett, "Bacon's *New Atlantis* and Campanella's *Civitas Solis*: A Study in Relationships," *PMLA*, XLVI (1931), 763-80.

[4]James Spedding, *The Letters and the Life of Francis Bacon* (London, 1868), IV, 26, 66.

[5]It is appropriate to suggest at this point that the *New Atlantis* deserves careful re-editing, with particular attention devoted to Bacon's use of contemporary and ancient experimentation. Bacon could not have been ignorant of Leonardo's experiments in flight; he must have known too such books as G.-B. Porta's *Magiae Naturalis* and the works of Paracelsus and Cornelius Agrippa.

attract Tycho himself with all his staff and movable equipment. Around 1610 other renaissance men of science were drawn to the Emperor's court, among them the Englishmen John Dee and Edmund Kelley and the Hollanders Cornelis Drebbel and Rembert Dodoens,[6] of whom only Drebbel is of great significance in connection with Bacon.

Cornelis Drebbel was born in Alkmaar, Holland, in the year 1572, the year of the new star. He worked for some years in the atelier of the painter-engraver Hendrik Goltzius, whose daughter he married. In 1605 he came to London and entered the sovereign's service; except for his stay in Prague and a few journeys back to his native Holland, England was his home until his death in 1633. In the second decade of the seventeenth century Drebbel was attached first to the household of Prince Henry, the heir, and after the prince's death to that of King James. A laboratory was provided him in Eltham Palace, where he carried on experiments excitingly like those described by Bacon; indeed, visitors to Eltham were as enthralled by the sights there as Bacon's sailors by the wonders of Salomon's House. To two such visitors, a German courtier in the train of Prince Louis-Frederick of Württemberg and the young Dutch diplomat Constantijn Huygens, we owe our partial knowledge of Drebbel's marvels.[7]

A scientific colleague of Drebbel, one who knew and respected the Hollander's accomplishments, was Salomon de Caus, also in Stuart service. Little is known of Caus's life. He was born about 1576 and died in 1626, and from the semi-autobiographical prefaces to his several works we can sketch his career. He was a Frenchman, often designated simply as such in the records of payments of the royal household. He too was assigned to Prince Henry's train, but was later transferred to that of the Princess Elizabeth, Electress Palatine, whom he accompanied to Heidelberg after her marriage with the Elector. When that Protestant couple fell upon difficult

[6]The only account in English of this group is Henry Carrington Bolton's unsympathetically titled *The Follies of Science at the Court of Rudolph II* (Milwaukee, 1904).

[7]William Brenchley Rye, *England as Seen by Foreigners in the Days of Elizabeth and James the First* (London, 1865), pp. 61 ff.; Constantijn Huygens, "Fragment eener autobiographie," *Bijdragen en Mededeelingen van het Historisch Genootschap*, XVIII, 116-21 (Koninklijke Akademie, MS Huygens XLVIII, foll. 835r-837v).

days and were forced to evacuate their territory, Caus did not accompany them to their refuge in The Hague, but apparently put himself at the service of his original sovereign, the King of France.[8]

When Drebbel and Caus were in England, however, Bacon had had ample opportunity to know of their work for his master, King James, to whom with so much hope he had dedicated his *Advancement of Learning*. When to Bacon's disappointment James showed little sign of implementing that great scheme,[9] and as his hopes of that monarch declined, Bacon turned his attention to the heir to the throne, Prince Henry, the most promising of Stuart princes. Both Drebbel and Caus were then among Prince Henry's artificers, attached to his household and under the supervision of Sir Thomas Chaloner, himself an amateur of scientific experimentation and the author of a book on nitre.[10] Bacon was quite aware of Chaloner's commanding position for anyone desiring to reach the prince, as one of his 1608 notes shows: "Makeing much of Russell that depends upon Sr Dav. Murry and by that means drawing Sr Dav. and by him Sr Th. Chal. in tyme the prince."[11] Although the prince died before Bacon could "draw" him and thus never lived to patronize an English academy, his inventor-servants, his "artificers," nonetheless served Bacon's purpose by providing graphic examples of scientific achievement.[12] Beyond this, the Hollander's public experi-

[8]There are three fairly recent biographies of Drebbel, of which one, G. Tierie's *Cornelis Drebbel* (Amsterdam, 1932), is in English. The others, H. A. Naber's *De Ster van 1572, Cornelis Drebbel* (Wereld-Bibliotheek, no. 54) and F. M. Jaeger's *Cornelis Drebbel en zijne tijdgenooten* (Groningen, 1922), are, unfortunately for us, written in Dutch. In his highly derivative and not wholly accurate book, Dr. Jaeger has pointed out some parallels between Drebbel's inventions and those of the *New Atlantis*. My conclusions were reached before I could see his book, and since that book is not readily available to English-speaking readers and its author was content merely to draw a parallel, I have nonetheless presented this study. For Caus, the best biographical article is in the *DNB*, which has an accurate bibliography of his works.

[9]King James was not wholly insensitive to Bacon's idea of an academy. See *Cal. State Papers, Domestic, James I*, CXXXI, no. 70, for a letter from James to Prince Charles, urging him to attend to the foundation of an academy for the arts and sciences.

[10]*A Short Discourse on the most rare Vertue of Nitre* (London, 1584).

[11]Bacon, *Works*, XI, 63.

[12]Bacon was not the only man to make literary use of Drebbel's inventions. Ben Jonson, albeit in ridicule, thrice referred to them. See Ben Jonson, *Works*, eds. C. H. Herford and Percy Simpson (Oxford, 1925-1951), V, 258 (*Epicoene* V. iii); VIII, 62 (Epigram XCVII, "On the New Motion"); VI, 329-30 (*The Staple of Newes* III. ii).

ments were widely attended and, one may asume, widely discussed among Londoners—and even among scholars abroad. Bacon himself may have been present at some such performance—at Chaloner's fireworks on Twelfth Night, 1608, for example, or at Drebbel's demonstration of his magic lantern. He may even have been shouldered by the crowd at the Thames-side in 1620 when Drebbel successfully submerged in his submarine, to the wonder of the citizens. With his great interest in gardening, too, Bacon could hardly have failed to know the gardens Caus laid out for Prince Henry at Richmond. In view of his constant and constantly frustrated hopes of Stuart patronage for the advancement of learning, it is quite possible that Bacon's use of their inventors in the *New Atlantis* was one of his many compliments to the royal family.

"Vaults, fornaces, Tarraces for Isolacion; woork houses of all sorts": in the simple note of 1608, kernel of all the later elaborations, lay Bacon's practical dream of Salomon's House. The visitors to the experimental academy were taken upon a tour of the premises, permitted to observe the operation of the vaults, of the furnaces, of the work-houses or laboratories. First of the "preparations and instruments" shown them were the "large and deep caves" used for "all coagulations, induracions, refrigerations, and conservations of natural bodies"; the second, "high towers" for insulation, refrigeration and conservation. Though Drebbel's laboratory at Eltham was by no means so well-equipped as that on Atlantis, he nonetheless carried on experimentation in refrigeration and observed, as would the Atlantians later, "diverse meteors, as winds, rain, snow, hail; and some of the fiery meteors." As early as 1607, with the publication of his little book, *A Short Treatise on the Nature of the Elements*,[13] Drebbel established his authority in the field of such observation. Much like his were the Atlantian experiments Bacon was later to describe, "in great and spacious houses where we imitate and demonstrate meteors; as snow, hail, rain, some artificiall rains of bodies and not of water, thunders and lightnings." What could Drebbel do in these matters? He "with divers instruments could make it rain, lighten, and thunder, at different times, as if it had come about

[13] *Van de Natuyre der Elementen* (n.p., 1607); later published as *Een Kort Tractaet van de Natuere der Elementen* (Haerlem and Rotterdam, 1621).

naturally from heaven, so that people knew no differently," wrote the chronicler Van der Woude. Godlike, he could also "with certain instruments, make it come about so that in certain places in midsummer it was as cold as if it were midwinter; and this at the request of His Majesty he brought to pass in the Great Hall of Westminster, where he made it so cold on a summer's day that the King and his nobles and many great lords were forced to flee the aforesaid place because of the cold."[14] Spedding has noted that Bacon's reference to "the late experiment of artificiall freezing" must have been to this demonstration of Drebbel's power; perhaps the Instaurator himself was among the great lords forced to flee Westminster on that summer's day.[15]

The "violent streams and Cataracts" which served Salomon's scientists "with many motions," the "engines for multiplying and enforcing winds to set also on diverse motions" were quite familiar to Drebbel and to Caus. Water- and windmills had of course long been in use, and both scientists developed their own versions of such mills. The "moving forces" of Caus's book *Les Raisons des Forces Mouvantes* (Frankfort, 1612), were, as one might suspect, the four elements, earth, air, water, and fire. Caus's particular specialty was water, used as cataracts to decorate his fountains and animate his artificial songbirds, and as steam to propel his engines. However unimportant Caus's elaborate renaissance fountains might appear to the casual student, they were no mere toys for princes and great ones; the complex motions of his moving figures and of his musical fountains resulted from genuinely imaginative experimentation in mechanics. Though not the first of its kind, Caus's steam engine, famous among his contemporaries, was one of the earliest such mechanisms perfected, in principle just as important as the revolutionary steam engine of the Industrial Revolution.[16] In addition to these, Caus developed other machines—mills, cranes, windlasses, and pumps—as did Drebbel also. Drebbel's drainage pump, designed apparently for use in the English fens, was so effective as

[14]Cornelis van der Woude, *Kronyk der Stad Alkmaar* (Amsterdam, 1725), p. 7.

[15]Bacon, *Works*, IV, 417, and I, 628.

[16]A[braham] Wolf, *A History of Science, Technology, and Philosophy of the 16th and 17th Centuries* (London, 1935), pp. 543-45.

to make Huygens say, "So far as I know, no one has made a more ingenious instrument than Drebbel for pumping what we call 'dead' or standing water from pools and for removing it to a proper place –and no one ever will."[17]

Caus's fountains were far more elaborate than those of Salomon's House, which were chiefly "in imitation of natural sources and baths." In his essay "Of Gardens," Bacon treated decorative fountains at greater length than he did in the *New Atlantis*. He preferred fountains to pools, which "mar all, and make the garden unwholesome, and full of flies and frogs"; but because they were not entirely natural, he did not care much for the kinds of fountains Caus designed, the intricate mechanisms of *Les Raisons des Forces Mouvantes* and the *Hortus Palatinus*, with their hydraulically activated birds and supernatural beings. Perhaps Bacon was thinking of Caus's popular designs when he wrote, "for fine devices, of arching water without spilling, and making it rise in several forms (of feathers, drinking glasses, canopies, and the like), they be pretty things to look on, but nothing to health and sweetness."[18] Bacon's fountains were to be functional and no more, and upon functional plans he looked with an approving eye. Drebbel's large but not unpractical idea of piping the Thames so that every house in London might have running water may not have found favor with King James, continually struggling with the problem of insufficient funds, but it was an "experiment of fruit" Bacon would have been pleased to see made effective.

Salomon's House conducted experiments upon plants and trees of which no similar record has come down to us from either Drebbel or Caus; it was otherwise with the experiments on animals. Drebbel's trials upon beasts and birds were remarkable. In his artificial incubators ("furnaces of great diversity") he could "at all times of the year, yes, even in midwinter . . . hatch Duck and Chicken eggs without any Ducks or Chickens by, and that so accurately that he knew precisely when the young would emerge, just as if they had

[17]"Fragment eener autobiographie," p. 118; MS Huygens XLVIII, fol. 836. See *SP*, *Domestic*, *Charles I*, 16, CLVIII, 34, fol. 75, for a fen-drainage contract involving Drebbel and the Oxford mathematician Henry Briggs.

[18]Bacon, "Of Gardens," *Works*, VI, 490.

been brooded by Ducks and Chickens."[19] Ducks and chickens were of course designed ultimately for the table, and though the "brew-houses, bake-houses, and kitchens" of Salomon's House may not seem to us the proper laboratories of scientists, we must remember that in this period diet was just beginning to be a medical problem. It may seem improper for Drebbel, described in the eighteenth century as "an exceptional and immeasurably excellent and understanding Philosopher whose great genius and acute comprehension (for his time) in the whole world had no equal among Philosophers,"[20] to have spent his time on recipes for cooking and processes for brewing beer, but this is to miss much of the point of renaissance experimentation. The whole area of science then came under review, and understanding of man's body, the microcosm, was as much a problem of natural philosophy as understanding of God's larger universe, the macrocosm. In his own career, moreover, Drebbel's culinary preoccupation stood him in good stead, for in his impecunious old age he was reduced to keeping "an alehouse below the Bridge" in London.[21]

Another of Drebbel's purely utilitarian experiments, too, would have properly found its way into Salomon's House, which derived part of its income from its "excellent dyes." Drebbel's scarlet dye was so important a trade secret that neither he nor his sons-in-law wished to share the process with anyone else.[22] Such homely experiments were related of course to the more theoretical Atlantian "experiments of light" with the furnaces "that keep great diversity of heats; fierce and quick, strong and constant; soft and mild; blown, quiet; dry, moist and the like." As the learned guide explained to his visitor, "But above all, we have heats, in imitation of the sun's and heavenly bodies' heats, that pass divers inequalities, and (as it were) orbs, progresses, and returns, whereby we produce remarkable effects." Imitation of the heavenly bodies, in designs, in globes, in astrolabes, and other instruments was common practice in the

[19] Van der Woude, p. 192.

[20] Ibid., p. 188.

[21] Bodleian Library, MS Rawlinson B. 158, foll. 174-75.

[22] Cambridge University Library, MS 2206, Ll. v. 8, Part II, fol. 50.

renaissance. Drebbel's perpetual motion, of which we shall speak later, was in his eyes an imitation of the heavenly orbs and in particular of the planet earth, whose ocean currents gave him the model for his "perpetual motion."

Except for his submarine, Drebbel's lenses were his invention best-known among scholars. Since Galileo's observations, natural scientists and virtuosos alike sought good lenses with special eagerness, both for distant and close observation. Salomon's House had "perspective houses," with

> ... demonstrations of all lights and radiations and of all colours; and out of things uncoloured and transparent, we can represent unto you all several colours, not in rain-bows, (as it is in gems and prisms) but of themselves single. We represent also all multiplications of light, which we carry to great distance, and make so sharp, as to discern small points and lines. Also all colourations of light; all dilusions and deceits of the sight, in figures, motions, colours: all demonstrations of shadows.

Drebbel's camera and magic lantern belonged in this subsidiary of Salomon's House; indeed, the last sentence of the quotation runs like a description of a show Drebbel put on with his lantern. Cameras like his were common enough, variations upon the instrument Kepler had developed and Wotton so enthusiastically described in a letter to Bacon.[23] In 1619, the year before Wotton had seen Kepler's "little black tent," Huygens bought one of Drebbel's cameras and took it home to The Hague, where he demonstrated its power of likeness ("la vie mesme") to his painter friends there. For all of his delight in the new toy, Huygens was disappointed by its one defect: like most crude cameras, it projected its images upside down.[24]

Drebbel's other optical instrument, the magic lantern, of which no complete explanation has come down to us, was even more wonderful in its effects than the camera. In a letter written in 1608 Drebbel described his Faustian achievements with that instrument:

[23]Henry Wotton, *Life and Letters*, ed. L. P. Smith (Oxford, 1907), II, 206.

[24]Constantijn Huygens, *De Briefwisseling 1608-1687*, ed. J. A. Worp, 6 vols. (1911-1918), I, 89-94.

I take my stand in a room and obviously no one is with me. First I change the appearance of my clothing and in the eyes of all who see me. I am clad first in black velvet, and in a second, as fast as a man can think, I am clad in green velvet, in red velvet, changing myself into all the colors of the world. Nor is this all, for I can change my clothing so that I seem to be clad in satin of all colors, then in cloths of all colors, now cloth of gold, now cloth of silver; and I present myself as a king, adorned in diamonds, and all sorts of precious stones, and then in a moment become a beggar, all my clothes in rags. . . .

Miraculous though this may seem, Drebbel could do more: he could present himself with "deceits in figures, in magnitudes," as well. He could become a "tree with all my leaves fluttering as if in a breeze," a lion, a bear, a horse, a cow, a calf, a pig. He could make it appear "that the earth was opening and ghosts arising from it, first as a cloud and then in the forms of good spirits, such as Alexander the Great or another prince or king." He could even call up supernatural beings, giants "such as there were in the old days, twenty or thirty feet high."[25]

The Baconian scientists could also "represent all manner of feats and juggling, false apparitions, impostures, and illusions; and their fallacies," but they did not approve of such demonstrations. "Deceits of the senses," tricks and apparent miracles were not the worthy ends of Salomon's House, where honor was paid to the one true miracle, nature herself. As the philosophers explained to their visitors, they had no need for magic:

. . . surely you will easily believe that we that have so many things truly natural which induce admiration, could in a world of particulars deceive the senses, if we could disguise those things and labour to make them seem more miraculous. But we do hate all impostures, and lies: insomuch as we have severely forbidden it to all our fellows, under pain of ignominy and fines, that they do not shew any natural work or thing adorned or swelling; but only pure as it is, and without all affectation of strangeness.

To study nature's essential miracle, any instrument or help was valuable, and Bacon equipped Salomon's House with the more con-

[25]Kon. Akad., MS Huygens XLVII, fol. 207r-v.

ventional and important optical instruments. The philosophers had procured

> means of seeing objects afar off, as in the heaven and remote places; and represent things near as afar off; and things afar off as near; making feigned distances . . . we have also glasses and means to see small and minute bodies, perfectly and distinctly; as the shapes and colours of small flies and worms, grains, and flaws in gems which cannot otherwise be seen, observations in urine and blood, not otherwise to be seen.

Bacon knew of course what magnifying glasses did, and by the time he came to write the *New Atlantis* he knew the exciting discoveries made possible by the telescope; both telescope and microscope were soon to become part of the virtuoso's standard equipment. Drebbel's lenses, as we have said, were particularly famous. Constantijn Huygens' father, good Calvinist that he was, saw fit to warn his son against Drebbel's "sorcellerie," but nonetheless asked that son to find out from the sorcerer all he could about lens-grinding techniques.[26] From France, Peiresc wrote Selden to ask the truth about "some long glasses, which make writing legible a league away"—no doubt an exaggerated account of Drebbel's glasses, which for years after Peiresc continued to praise.[27] Sir Robert Killigrew sent Dudley Carleton, then envoy to The Hague, a "perspective glass" from London ("after having broken forty others getting it ground"),[28] almost certainly one of Drebbel's instruments, for Drebbel was an associate in the Killigrew circle.

Drebbel invented instruments for other senses as well, with one of which, at least Bacon was familiar. In his *Phaenomena Universi* he referred to "certain Hollanders, recently come among us, who have made a certain instrument of music, which when struck by the rays of the sun emits soft music."[29] Both the German observer and young Huygens recorded their astonishment and pleasure at the "virginals which played of themselves" on view in Drebbel's labo-

[26] *Briefwisseling*, I, 89.

[27] *V. Cl. Camdeni et Illustrium Virorum ad Seldenum Epistolae* (London, 1691), 479; N. Fabri de Peiresc, *Lettres*, ed. Ph. Tamizey de Larroque, 6 vols. (Paris, 1881-1898), VI, 28.

[28] *SP, Domestic, James I, 1619-1623*, p. 77.

[29] Bacon, *Works*, III, 711-12.

ratory. Salomon de Caus knew Drebbel's instrument, for his description of it in *Les Raisons des Forces Mouvantes* follows directly upon his description of Drebbel's famous Neptune fountain—in which Neptune, tritons and nymphs in his train, emerges from a cave behind the jet of water and progresses in a horse-drawn chariot through the water and out of sight again behind the jet. Caus's own musical instruments exhibited many variations upon the self-playing theme, which apparently fascinated him. One of these is a delightful ancestor of the player piano, the secret of whose operation he revealed in a sketch of the instrument. Like the "Pioners" of Salomon's House, Caus could "represent . . . the voices and notes of . . . birds": many of his fountains carry directions "Pour contrefayre le chant d'un oyseau en son naturel, par le moyen de l'eau," and most elaborately, "Pour fayre representer plusieurs oyseaux lesquels chantent diversement quand une chouette se tournera vers iceux, & quand ladite chouette se retournera, ils cesseront de chanter." The little owl-conductor of this artificial symphony appears solemnly in the accompanying engraving, hardly larger than the mechanical songbirds whose music he controls.

Bacon's sound-houses also studied "strange and artificial echoes, reflecting the voice many times, and as it were tossing it; and some that give back the voice louder than it came, some shriller and some deeper. . . ." Bacon could have seen these tricks played by Caus, for the French inventor could produce such variations in his fountains. One of them contained a grotto from which Echo answered a satyr's flageolet, another a cave from which Orpheus played a cello for the beasts assembled about its mouth to hear him. If the garden of Salomon's House had boasted such elaborate fountains, the experts from the engine-houses would have had to cooperate with those of the sound-houses, for it was in the engine-houses that the movements of living creatures were imitated. Caus had similar fountains in which artificial songbirds and even swans were made to drink from a cup as long as it was offered them, and of course his adaptation of Drebbel's Neptune fountain imitated the movements of living creatures, as the half-submerged chariot of the water-god was drawn about the central flume.

The engine-houses of Salomon's House were incredibly rich in

machines—this was the "Inginary" Bacon had envisaged so many years before. On Atlantis the scientists had perfected "swifter motions than any you have," such as Drebbel's torpedo, for instance, which was so ineffectually used in Buckingham's expedition to La Rochelle.[30] Even in the ideal commonwealth of the New Atlantis, Bacon could not forget England's specific needs; on that isolated and charmed island, the philosopher-inventors were busy with implements of war and "new mixtures and compositions of gunpowder" for a real island less isolated from unfriendly neighbors. King James had need of arms and ordnance, and for their sporadically warlike employer both Drebbel and Caus turned their hands to such inventions, as well as to "fireworks for pleasure and use." The machine for "going under water and brooking of seas" developed at Salomon's House was for use in war. The original of this ideal boat, one of the first successful submarines, was an invention Drebbel made for King James. In 1620 he demonstrated it in the Thames. Huygens, present among the crowds of courtiers and citizens by the river's edge that day, left a fine description of the event:

> Equal in value to all the inventions put together is the little ship in which he calmly dove down under the water and thus held the king, his court, and several thousand Londoners in excited expectation. For the most part the onlookers thought that he had had an accident in this work of art of his when he did not come up in three hours' time, as he had said he would, when at a great distance from the spot where he had submerged, he emerged again. He called upon the several persons who had undergone the experiment with him to bear witness that they had had no discomfort under the river, but that they had as they listed sunk to the bottom of the river and when they chose risen to whatever height they liked.[31]

According to Huygens, this boat had no funnel; the likelihood is that Drebbel knew the nature of oxygen and used it, in a form derived from saltpetre, to provide the underwater sailors with air. The idea of the submarine was, again, not original with Drebbel, any more than the idea of the camera, but his daring to risk the experiment upon his own body and his spectacular success with it brought

[30] "Fragment eener autobiographie," pp. 99-102.

[31] Ibid., pp. 117-18.

him peculiar renown as the "inventor" of the submarine. As one source tells us, Drebbel owed some of the success of his alehouse to his prowess as a submariner: "He had an invention of goeing under water which he used so advantageously that many persons were perswaded that he was some strange Monstar and that means drew many to drink his ale."[32]

From these practical machines, Bacon turned to the most difficult and captivating physical problem of his period. "We have," said the Atlantian guide, "divers curious clocks, and other like motions of return: and some perpetual motions." The relation between the motion of the heavens and the motion of clocks had long been obvious, for a clock was no more than a metaphor of the earth's relation to the sun. Caus developed a great many clocks, beautifully illustrated in *Les Raisons des Forces Mouvantes*. Another of his books, *Pratique et Demonstration des Horloges Solaires* (Paris, 1624), was written to provide his contemporaries with a modern treatment of the action of the sun's rays; in it he propounded many different kinds of sundials and clocks working in relation to the noonday sun. "Some perpetual motions"—this was the ticklish question, and more than one natural philosopher had attempted its solution until Kepler's law of motion was accepted by scientists and the ideal of perpetual motion dismissed as a practical impossibility. But until friction and attrition were more fully understood, perpetual motion remained the questing-beast of renaissance physics. The well-informed Peiresc wrote asking about the instrument Drebbel had made, "d'un globe de verre, dans lequel il fait representer le flux et reflux de la mer, par un mouvement perpétuel réglé comme le flux naturel de la mer. . . ."[33] There is a sketch of this hydraulically operated machine in Drebbel's book on the four elements, reproduced in Thomas Tymme's partial translation into English.[34] It was

[32]Rawlinson MS B. 158, fol. 175.

[33]*Camdeni Epistolae*, p. 387.

[34]Thomas Tymme, *A Dialogue Philosophicall, wherein Nature's Secret Closet is opened and the cause of all Motion in Nature shewed out of Matter and Form. Together with the wittie invention on an artificiall perpetuall motion (by Cornelis Drebbel)* (London, 1612).

a glass spiral in which the movement of its tides was indicated by the rise and fall of the liquid within it. Although, as Huygens recorded, the instrument was so cleverly constructed that it was impossible to see exactly how it worked even after it was broken, it is nonetheless clear that the instrument was a kind of barometer that responded to air pressure.[35]

The idea of a perpetual motion, a man-made image of God's creation, fired men's minds. Huygens' memorandum of Drebbel's perpetual motion was headed "Gloria in Excelsis Deo," a pious proclamation of the wonders of God's laws. Like Drebbel's perpetual motion, Bacon's instrument, his Salomon's House, his House of the Six Days Work, was another metaphor of the created universe, a compliment to the Lord's authorship of the Book of His Works, the book Salomon's scientists set themselves to study. However metaphorical the name of their foundation, however ideal their plan of universal knowledge, the scientists' work was practical. With so much of his own work left undone—even the *New Atlantis* closes with Rawley's sorrowful note, "The rest was not perfected"—Bacon knew how fragmentary was the work a man could accomplish in his lifetime, knew that his scientists needed far more than the psalmist's literal week for their mortal endeavor. In the perpetual co-operative effort to learn "all things possible" about God's creation, Bacon's inventors had to begin where they could be sure of their material, with the particulars of natural science; indeed, Bacon's "reasons for hope," so stirring to his generation, rose from his belief in those very particulars. From such contemporaries as Drebbel and Caus, like him conducting their business in the sovereign's service, he could perceive the remarkable results of dedicated occupation

[35]Kon. Akad., MS Huygens XLVII, foll. 134r-135v. Speculation on perpetual motion was plainly dangerous; Caus, though he discussed the problem at considerable length in *Les Raisons des Forces Mouvantes*, was careful to reject the idea itself as "blasphemous." Thomas Tymme, Drebbel's translator and disciple, believed that his master's perpetual motion contradicted Copernican and Keplerian astronomy. As Francis Johnson has shown in *Astronomical Thought in Renaissance England* (Baltimore, 1937) such judgment was unfair to Drebbel, as more "modern" partisans than he of the new science adhered to the ideal of a perpetual motion. (See P. P. Rubens, *Correspondance*, ed. Ch. Ruelens and Max Rooses [Anvers, 1887-1909], III, 218, 309, 324).

with particulars; from them the practical method of his academy took its form. To the great parable of Salomon's House the two inventors, the two projectors contributed; their creative imaginations moved Bacon to his visions of an unequaled utopian world, a utopian ideal to be put into practice, a purpose for the perpetual motion of the advancement of learning.

Two Baconians: Robert Boyle and Joseph Glanvill

By Dorothea Krook

A TYPE OF INQUIRY that is peculiarly rewarding to the historian of thought is that which seeks to trace the transformations the master doctrine of a period undergoes as it passes out of the keeping of the master into that of the successive generations of his disciples. Such a process, it will be found, almost always bears the character of a progressive simplification of the original doctrine. The master's steady hold on the whole of his doctrine cannot, it seems, be transmitted to the disciples; consequently they tend to see and understand in part only, and the doctrine in the end emerges as considerably diminished in stature. What has been lost is its original complexity, subtlety, and flexibility, and with these much of its comprehensiveness and depth.

This is not to say that there may not also be compensating gains. Certain limited aspects of the original doctrine may be more fully developed, the implications of certain individual insights more fully grasped and more thoroughly explored by the disciples than by the master himself. And this more positive side of the process of modification and transformation ought of course to be recognized and given due emphasis in any inquiry of this kind.

One instance of such a transformation of a leading doctrine in the history of English thought is that of Francis Bacon's philosophy of science. A full history of the vicissitudes of Bacon's empiricist philosophy of science in the seventeenth century in England would be, predominantly, the history of the modifications it underwent when it passed into the keeping of the Royal Society, in the period extending roughly from 1660 to 1690. The year of the appearance of the *Essay concerning Human Understanding*, 1694, might be taken for convenience to mark the end of the period during which the doctrine of the *Novum Organum* was exercising its main influence on the thought of the Royal Society, and was receiving those modifications that led in the end to its easy assimilation—along

with the philosophies of Descartes and Newton—into the new philosophic synthesis of John Locke. And such an inquiry might suitably culminate with an examination of the Baconian elements in the *Essay* itself.

The present paper, however, attempts nothing so ambitious as a full-scale study of the Baconian influence in seventeenth-century speculations on the philosophy of science. Its object is to make no more than a small contribution to the larger inquiry by considering in this connection two representative writers of the Royal Society group, Boyle and Glanvill. The empiricism of these two, Boyle's in particular, happens to stand closest to Bacon's own—closer than, for instance, that of Thomas Sprat; and there is some interest in examining briefly the salient points of resemblance and difference between their pronouncements upon scientific method and related topics and those of Bacon himself.

I

Francis Bacon, master empiricist

(i) *Rationalism and Empiricism*

Bacon's claim to the title of master empiricist rests, for our purpose, upon his radical critique of the Aristotelian theory of science. The pure rationalism of the peripatetic theory of science will not do (runs the famous argument of the *Novum Organum*) because logical coherence alone is inadequate as the criterion of scientific truth. To qualify as fully scientific, a physical theory must be empirically grounded. If it is not thus empirically grounded, if our basic physical concepts are only "grossly and variably collected out of particulars" and are therefore empirically false, "it is not," says Bacon, "the laborious examinations either of consequences of arguments or of the truth of propositions that can ever correct that error. . . ."[1] It is this viciously one-sided view of science that, for Bacon, accounts for the thoroughly unscientific character of the received Aristotelian physics. Its physical theories, he points out repeatedly, are based upon observations casual, superficial, and

[1] *Advancement of Learning*, ed. G. W. Kitchin, Everyman's Library (New York, 1915), p. 126.

unsystematic: it restricts itself to "common instances," refusing to "go to and fro to remote and heterogeneous instances by which axioms are tried as in the fire." And the effects of these misdirected inquiries may be seen in the desperate condition of natural philosophy in his own time:

> Nothing duly investigated, nothing verified, nothing counted, weighed or measured, is to be found in natural history: and what in observation is loose and vague, is in information deceptive and treacherous. (*Nov. Org.*, I, XCVIII.)

> The axioms now in use, having been suggested by a scanty and manipular experience and a few particulars of most general occurrence, are made for the most part just large enough to fit and take these in: and therefore it is no wonder if they do not lead to new particulars. (Ibid., I, XXV.)

> The discoveries which have hitherto been made in the sciences are such as lie close to vulgar notions, scarcely beneath the surface. In order to penetrate into the inner and further recesses of nature, it is necessary that both notions and axioms be derived from things by a more sure and guarded way.... (Ibid., I, XVIII.)

It is not necessary here to enter into any discussion of the methodological value of the "more sure and guarded way" that Bacon was to expound in Book II of the *Novum Organum*. It is enough to remark that his principal intention and achievement was to restore to natural science its empirical character, which, he was fond of observing, the pre-Socratic philosophers of nature understood so much better than either Plato or Aristotle, and the medical scientists of Padua of his own time understood best of all.[2]

This of itself, however, though it might be enough to call the Royal Society into being, would not be enough to establish Bacon's status as a great philosopher of science. His philosophical grasp of the logic of science is shown in his equal insistence upon the *rationalist* character of natural science. A physical theory is for him a rational no less than an empirical structure; its character *as a system* is no less important than its predictive accuracy; and both conditions

[2]See J. H. Randall, Jr., "The Development of Scientific Method in the School of Padua," *Journal of the History of Ideas*, I (1940), 177-206.

must be satisfied in order that it shall be genuinely scientific. Most of the definitive passages on this theme occur in the well-known aphorisms concerning Inductive Method:

> Our road does not lie on a level, but ascends and descends; first ascending to axioms [i.e., hypotheses, theories, or laws of the highest generality] then descending to works [i.e., correct prediction]. (*Nov. Org.*, I, CIII.)

> My course and method . . . is this—not to extract works from works or experiments from experiments (as an empiric), but from works and experiments to extract causes and axioms, and again from those causes and axioms new works and experiments, as a legitimate interpreter of nature. (Ibid., I, CXVII.)

> . . . My directions for the interpretation of nature embrace two generic divisions; the one how to deduce and form axioms from experience; the other how to deduce and derive new experiments from axioms. (Ibid., I, X.)

It is this recognition of the rationalist aspect of scientific theory that sets Bacon apart from the representative Baconians of the Royal Society. And in Bacon this means more even than the recognition of an epistemological truth, in itself sufficiently important. It means that he understands intimately the satisfactions of rationalist thought, and understands, therefore, what precisely it is he is rejecting when he undertakes his historic campaign against the peripatetic theory of science. This understanding is, of course, not at all a matter of accepting, or even tolerating, those satisfactions. It is a matter, rather, of his insight into the movements of the questing mind as it presses on from the lowest axioms to the highest; of his sympathy with the rationalist passion for comprehensiveness of generalization; and his own participation in the enjoyments belonging to that passion:

> . . . The human understanding being unable to rest, still seeks something prior in the order of nature. . . . (Ibid., I, XLVIII.)

> . . . For the mind longs to spring up to positions of higher generality, that it may find rest there; and so after a little while wearies of experiment. . . . (Ibid., I, XX.)

This is the kind of understanding that belongs distinctively to the great reflective mind, in which the empiricist and rationalist elements may be distinct but are never divided.

(ii) *Physics and Logic*

For further evidence of Bacon's power to see the scientific enterprise steadily and whole, it is worth considering briefly his attitude to the received Aristotelian logic. The consequence of viewing physics as inseparably empirical and rational in character is, we find, that he cannot reject the Aristotelian physical doctrines in their empirical (or "material") aspect without *at the same time* rejecting them in their logical (or "formal") aspect. In all his polemics against peripatetic science, he constantly draws attention to this intimate connection between the "logic" and the "science," the formal and the empirical aspects. For he knows that the chief source of resistance to the new empiricism is to be found in men's established *habits of inference*; and these, being for the most part held unconsciously, are for that reason much more difficult to root out than the received empirical (or quasi-empirical) doctrines. So long as people are left free to assent to a method of inference by which elaborate physical theories can plausibly be made to emerge from a few casual, superficial, unchecked observations, there can be no hope of making them see the worthlessness of those observations, nor the worthlessness, consequently, of the physical axioms which have been "educed" from them. The received logic—and that for Bacon means men's established habits of inference—must therefore be overthrown *before* the received physics can be tackled; and a new logic—that is, a new set of habits of inference—must be laid down and rendered acceptable in order that a new physics may be possible. "As the sciences which we now have do not help us in finding out new works, so neither does the logic which we now have help us in finding out new sciences," he writes in the *Novum Organum* (I, xi). This statement may be expanded as follows: If "science" is an ordering of phenomena (or a systematic account of observations) by which we do not only establish coherence and so satisfy the rational mind, but also predict and control and thus "find out new works," then the Aristotelian science is defective precisely

by its lack of this power to predict accurately and, consequently, also by its lack of the power to control the physical world. And if "logic" is the instrument, or "organon" for creating those "sciences" to which it supplies the rules of induction and deduction whereby the phenomena are ordered or systematized into physical theories, the Aristotelian logic proves itself useless for its proper purpose–for "finding out new sciences"–since it fails conspicuously to create physical theories by which we may predict and control. What the passage significantly brings out is that an indictment of the established physics is also and *at the same time* an indictment of the established logic. Again:

> The logic now in use serves rather to fix and give stability to the errors which have their foundation in commonly received notions than to help the search after truth. So it does more harm than good. (*Nov. Org.*, I, XII. Cf. I, XV, XVII, CXXV.)

In other words, the common logic, in so far as it claims for itself an absolute, immutable validity, has the effect of "petrifying" the false physics by investing it with a specious permanence; and that is why it "does more harm than good."

And it is a characteristic mark of Bacon's greatness that he should realize the full implications of what he is proposing and should insist on proclaiming them explicitly. He realizes, that is, that such a radical attack, not merely on the received physics but also on the received methods of inference, means that there can be no common ground between him and the enemy. Thus, in a famous passage:

> I . . . would have my doctrine enter quietly into the minds that are fit and capable of receiving it; for confutations cannot be employed when the difference is upon first principles and very notions and *even upon forms of demonstration.*[3] (Ibid., I, XXXV.)

And with more emphasis in the discussion of the Idols of the Theatre:

> [These] are plainly impressed and received into the mind from the playbooks of philosophical systems and the perverted rules of demon-

[3] My italics here and throughout except where otherwise stated.

stration. To attempt refutations in this case would be merely inconsistent with what I have already said: *for since we agree neither upon principles nor upon demonstrations, there is no place for argument.* (Ibid., I, LXI.)

And again, when he proposes to refute the Idols by analysis of their "signs" and "causes," he explains that "no other refutation was open to me *differing as I do from others both on first principles and on rules of demonstration.*" (Ibid., I, CXV.)

2

Robert Boyle, a good Baconian

I have suggested that Bacon's philosophy of science undergoes a process of simplification when it passes into the keeping of the Royal Society. That simplification is seen most conspicuously in the tendency to reduce Bacon's comprehensive account of the character of empirical science to a bare empiricism that minimizes almost out of existence its rationalist aspect. What Bacon understood of the satisfactions of rational-scholastic thought is almost completely lost; and what he understood of the ultimate end of the scientific enterprise, the discovery of "axioms" of the highest generality ("forms," that is) in a truly scientific sense—this aspiration seems to matter to the Fellows of the Royal Society much less than the accumulation of facts and "explications" of the kind recorded by Sprat in the Appendix to his *History of the Royal Society.*

There are, however, honorable exceptions, and of these Robert Boyle is the most outstanding. Boyle does understand all that Bacon meant by scientific method and is able to propagate the true Baconian doctrine with genuine fervor, if without the master's brilliance. What, specifically, he shares with Bacon is the cardinal insight concerning the nature of scientific theory—that it is at once and inseparably rational and empirical; and it is this insight, rather than his much-praised impartiality in respect of the quarreling sects of corpuscularians, or his exemplary restraint in the matter of premature "system-building," or his noble lineage ("doubly honourable, both for his parts and parentage," as one admirer puts it),

that sets him apart from the more extravagant empiricists of the Royal Society circle such as Glanvill and Henry Power.

Some of his briefer representative statements on this important matter are worth citing. In the "Proemial Essay" to *Certain Physiological Essays* (1661), for instance, he mentions among the "very good uses" of essays such as these he has brought together that "the curiosity of readers, whether they like or disapprove the hypotheses proposed, is wont to be thereby excited to make trial of several things *which seeming to be consequences of this new doctrine may, by their proving agreeable or repugnant to experiment*, either establish or overthrow it."[4] In another treatise,[5] he again expresses his conviction that the mechanical philosophy will commend itself to "unprejudiced persons" "*by its consistency with itself, and its applicableness to so many phenomena of nature*." By "consistency with itself" he means establishing its rational truth, by "applicableness to so many phenomena of nature," its empirical truth. And when he is discussing the superfluousness of the peripatetic hypothesis of "substantial forms," he offers in passing a theory of explanation which, though couched in Aristotelian phraseology, leaves no doubt about his recognition of the rationalist aspect of scientific truth:

> . . . To explicate a phenomenon [is] to deduce it from something else in nature more known to us than the thing to be explained by it.[6]

[4]Boyle, *Works*, ed. Thomas Birch (1744), I, 194.

[5]*Of the Excellency and Grounds of the Corpuscular or Mechanical Philosophy*, *Works*, III, 456.

[6]*An Examen of the Origin and Doctrine of Substantial Forms*, *Works*, II, 482b. Compare with this his remark (in *The Vulgarly Receiv'd Notion of Nature*, IV, 421b) that no man has "well perform'd the part of a true Physiologer till he have circumstantially or particularly deduc'd the Phaenomenon he considers, by Intelligible Ways, from Intelligible Principles"; and still another statement in the "Proemial Essay" to *Certain Physiological Essays*, *Works*, I, 198:

> I consider, then, that, generally speaking, *to render a reason of an effect or phenomenon is to deduce it from something else in nature more known than itself*; and that consequently there may be divers kinds of degrees of explication of the same things. . . .

That is to say, hypotheses may be more or less comprehensive or general, therefore, *viewed as causes*, more and less "final." The rest of the passage restates Bacon's doctrine of the "hierarchy of causes" (see *Nov. Org.*, I, civ), as follows:

> For although such explications be the most satisfactory to the understanding wherein it is shown how the effect is produced by their more primitive and catholick affections of matter, namely, bulk, shape and motion; yet are not these explications to

Boyle also shows himself to be conscious to a remarkable degree of the truth-value of sheer, logical "derivability." A particular scientific proposition, he observes, that is "incredible" when viewed in isolation may readily command assent when it is seen as the logical consequence of a more general proposition—that is, an "axiom" or postulate of a whole scientific theory—to which assent cannot but be given. He cites the instance of the loadstone: magnetical phenomena, "which, being nakedly propos'd, must seem unfit to be believ'd as indeed having nothing like them in all nature," yet, when they are seen to be "*consonant and consequent to the Doctrine of Magnetism* whose grand Axioms (from what final cause soever Magnetisms are to be deriv'd) are sufficiently manifest," themselves become "sufficiently manifest."[7] In other words, the rational or demonstrative truth of a proposition—its "consonance" and "consequence" to the main postulates of an accredited theory—may legitimately command assent to that proposition when its direct empirical verifiability seems, at first sight, highly questionable. And this same disposition in Boyle to recognize the equal validity of rational ("conjectural") truth and empirical ("experimental") truth is evident in the opening remarks of his famous critique of the *tria prima* of the "Chymists": he will undertake, he says, to examine one of the chymists' propositions "*first conjecturally, then experimentally*"; and both ways are legitimate and valid because "there is a great difference betwixt the being able to make experiments, and the being able to give a philosophical account of them."[8]

In his appreciation of the true nature of scientific method, then, Boyle stands very close to Bacon. He is not indeed exempt from the bias in favor of "experimental" truth that is characteristic of the Royal Society group as a whole. But his partiality, being controlled by his comprehensive view of scientific method in general,

be despised, wherein particular effects are deduced from the more obvious and familiar qualities or States of bodies, such as heat, weight, fluidity, hardness, fermentation, &c., though these themselves do probably depend upon those three universal ones formerly named. For in the search after natural causes, every new measure of discovery doth both instruct and gratify the understanding, though I readily confess that the nearer the discovered causes are to those that are highest in the scale or series of causes, the more is the intellect both gratified and instructed.

[7] *The Reconcilableness of Reason and Religion*, *Works*, III, 523b.

[8] *The Sceptical Chymist*, *Works*, I, 331a.

is uncommonly intelligent; and this intelligence shows itself in the details of his discussion of particular problems. The well-known argument in *The Sceptical Chymist* against the doctrine of the "three elements" is a nice instance. Boyle's fundamental criticism of the doctrine is that it obscures the qualitative differences of things by "huddling" them together under these abstract "common" properties. The three elements or principles, he is saying, are *bad* abstractions because they do not "cover" the particulars in their full qualitative particularity; or—if we take the doctrine of the *tria prima* as a quasi-scientific theory or "explanation" of the particulars—it exposes itself as defective because it does not adequately account for the complex of particular qualities belonging to particular bodies as these are observed "experimentally." For instance, says Boyle, the chymists speak of the mercuries of bodies "as if they all had a similar nature"; whereas on the evidence of experimental observation, they are exceedingly different in different bodies, being modified by the other specific qualities of the specific body.[9] Boyle, therefore, feels justified in condemning the "elements" doctrine as useless or—in Locke's phrase—"uninstructive": useless equally as a rational explanation of the phenomena and for prediction and control. The indictment is worth quoting in full. Suppose, argues Boyle,[10] it were true

> that salt or sulphur were the principle to which this or that quality may be peculiarly referred, yet *though he that teaches us this teaches us something concerning that quality, yet he teaches us but something.*[11]

[9] "They generally retain the virtues of the concretes from whence they were drawn," are his own words; and he cites as examples the difference between "vegetable fixed salts" and "animal volatile" ones (salt of tartar and salt of hartshorn) and between the varieties of sulphur (the "dynamical oyls" of things) and of mercury. Therefore, concludes Boyle, the definition they give of each of the elements "is not so much a Definition of it as an Encomium." (*Sceptical Chymist*, *Works*, I, 341.)

[10] Ibid., I, 353.

[11] I.e., it teaches us its "inoperative" qualities, by which only its place in the theoretical system is established, but which cannot issue in "works."

It is interesting to contrast Boyle's own version as I have reproduced it above with the version contained in *The Works of the Hon. Robert Boyle*, Epitomiz'd in 4 volumes, by Richard Boulton of Brazen-Nose College in Oxford. Dr. Boulton's abridged version appeared in 1700, when Locke's *Essay Concerning Human Understanding* had already been sufficiently long before the educated public to make its influence

For indeed he does not teach us that, which can in any tolerable measure satisfy an inquisitive searcher after truth. For what is it to me to know that such a quality resides in such a principle or element, whilst I remain altogether ignorant of the cause of that quality, and the manner of its production and operation? How little do I know more than any ordinary man of gravity, if I know but that the heaviness of mixt bodies proceeds from that of the earth they are composed of, if I know not the reason, why the earth is heavy? and how little does the chymist teach the philosopher of the nature of purgation, if he only tells him, that the purgative virtue of medicines resides in their salt?

Again,

But, I should, perchance, forgive the hypothesis I have been all this while examining, if, though it reaches but to a very little part of the world, it did at least give us a satisfactory account of those things to which it is said to reach. But I find not, that it gives us any other than a very imperfect information even about mixt bodies themselves: for how will the knowledge of the *tria prima* discover to us the reason why the loadstone draws a needle, and disposes it to respect the poles and yet seldom precisely points at them? How will this hypothesis teach us how a chick is formed in the egg, or how the seminal principles of mint, pompions, and other vegetables . . . can fashion water into various plants, each of them endowed with its peculiar and determinate shape, and with divers specifick and discriminating qualities. (*Works*, I, 347.)

"How will the knowledge of the *tria prima* discover to us the reason why the load-stone draws a needle. . . ." The *tria prima*

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felt. That influence is, I think, evident in Boulton's précis of the Boyle passage. It runs as follows:

That Colours and other qualities reside in this or that Principle, *I see not what Information it gives us.* For what is it to know that Gravity proceeds from an Earthly Ingredient, if I know not why Earth is heavy? And what information could a man receive of the Qualitie of a Purgative Medicine, were he only told that that Quality depended upon Salt? For it is one thing to know the Quality of a Body and another to be acquainted only with the Substance wherein that Quality resides." (Boulton, IV, 100.)

"I see not what Information it gives." This is Locke's own peremptory voice when he is disposing of "trifling propositions" (see *Essay*, Bk. IV, chap. 8, 2-3); and it contrasts quite sharply with the much more tentative tone of Boyle's much more qualified denial. Boyle is ready to allow that "he that teaches us this *teaches us something*"—and the something that he is still ready to recognize is the purely rational validity of the "elements" theory. But by 1700 the triumph of "experimental" truth is complete; Locke's *Essay* has authoritatively declared the "something" that Boyle still acknowledges, to be mere empty verbalism; and Dr. Boulton is able to ignore Boyle's qualification without any sense of having violated the meaning of his author.

theory, in other words, purports to describe the minute structure of the loadstone. But what it says about that structure is "inoperative" because the actual observed behaviour of the loadstone cannot be deduced from that description. And again: the "elements" theory is useless for explaining the phenomenon of growth in animals and plants because it is impossible to deduce from that supposed explanation the "divers specifick and discriminatory qualities" of bodies.

So much, then, stands to the credit of Boyle's empiricism and testifies to his genuine understanding of Bacon's philosophy of science. There are other things, indeed, that leave one less satisfied; and chief among these is his caution about "system-building," for which he was in his own age more than sufficiently admired (and has again, more recently, been admired by Dr. Joseph Needham, in his essay on Boyle in *The Sceptical Biologist* [London, 1929]). This feature of Boyle's philosophic temper illustrates in a small way the kind of simplified Baconianism that became the official philosophy of the Royal Society in those formative thirty years between 1660 and 1690. Certainly Bacon ceaselessly emphasized the importance of an exhaustive "natural history" as the foundation of the great pyramid of science. Certainly he warned ceaselessly against the danger of premature systematizing. And his sense of the intractable factuality of the observed, the measured, the weighed was certainly among his chief claims to the title of master empiricist.

Yet:

> My course and method . . . is this—not to extract works from works or experiments from experiments (as an empiric), *but from works and experiments to extract causes and axioms*, and again from those causes and axioms new works and experiments, as a legitimate interpreter of nature;

and:

> Contemplations of nature and of bodies in their simple form break up and distract the understanding, while contemplations of nature and bodies in their composition and configuration overpower and dissolve the understanding. . . . These kinds of contemplation should therefore be alternated and taken by turns; that so the understanding may be rendered at once penetrating and comprehensive. (*Nov. Org.*, I, LVII.)

It is this imperial quality of the scientific imagination that we miss in a mind like Boyle's. His genuine modesty is indeed very disarming. In the "Proemial Essay" to *Certain Physiological Essays*, for instance, he declares that he does not intend to "explicate things" and "promote opinions" prematurely, even though he knows the penalty of such a renunciation—that he will be regarded as no more than a "drudge of greater industry than reason, and fit for little more than to collect experiments for more rational and philosophical heads to explicate and make use of."[12] Nevertheless, we do contemn the caution a little; and feel much sympathy with Dr. John Beale when, in a long letter to Boyle, he expresses the opinion that Boyle was perhaps a shade too tentative about hypothesis-making, and that the caution proper to the experimental temper ceases to be a virtue when it falls into its characteristic excess, pusillanimity. Dr. Beale's criticism[13] expressed in circumlocutions of the utmost delicacy, are, I think, worth quoting as a charming "period" comment upon this last amiable weakness of Robert Boyle.

> I do not forget, [he begins] that you have rendered sufficient reasons against presumptuous affectation of methods, and hasty systems; yet we should also take notice of your concessions in your Proëmal Essay, pag. 5 and 6 that there is a usefulness and a season for systems. And certainly, when a store of good materials are collected (be it of cement, stone, timber, and metals) it will have more usefulness, ornament and strength, if skilfully ordered into a fit building, than in a confus'd heap. Order gives facility and lustre to every business. And this may plead for my last officiousness.

He continues:

> You have performed the hardest tasks in philosophy, and yet you omit, and perchance neglect to reap for yourself, and to solicit for others, the main benefit and application. . . . You have found out the polar uses of the loadstone, and the assistances it offers for navigation; but you have not applied it to discover the other world, and to fetch hither the silver of *Potosi* and the gold of *Peru*. . . .

He interrupts his exhortation at this point to recall the ephemeral popularity enjoyed first by Ramism, then by Calvinism, in the

[12] *Works*, I, 197.

[13] Boyle's Letters, in *Works*, V, 483 ff.

Cambridge of his day, in order to point the moral that, having seen "those old and rotten standards so often fallen by the sharper hatchets of the youngest graduates . . . it may direct and admonish us not to dispise to furnish our younger and swiftly growing academicians with the store of your well-tried weapons"; then continues:

> Sir . . . I would softly insinuate into your ear that we are not ripe for these successes, nor have just ground of expectations, till you shall please to draw forth your experiments and observations into hypothesis such as they do fairly bear, and unite them as far as they give mutual strength, and light, and assistance. For though it be good to learn first to spell well, yet we must not leave off there, nor rest there too long. And I cannot discern a reason, why you should continue so shy of advancing to some positiveness, after so large a view of so many experiments, and such mature experience. . . .

And he concludes with an emphatic reminder to Boyle of his duty to the "younger and swiftly growing academicians":

> Without a series of some propositions, and some systems, it is impossible to carry a strong vogue in our universities; who, when they see the necessity of experimental demonstration for their conquest (even in language and disputations) will soon and gladly exchange their impertinent volumes, for quadrants, rulers, alembics and curious scales, &c. And thus diligent students might be enabled both to understand something aright, and to do something. And thus you draw both the universities to your aid.

3

Joseph Glanvill: the definition of definition

Joseph Glanvill in his rôle of enthusiastic, prolific, and contentious propagandist for the experimental philosophy and the Royal Society is now sufficiently well-known to modern students of seventeenth-century thought. The work of "discovering" and presenting Glanvill in this light was accomplished by Professor Basil Willey in his authoritative and charming study in *The Seventeenth Century Background* (London, 1934), which has secured for Glanvill a permanent place in the history of thought in our period and leaves little room for further discussion or documenta-

tion of Glanvill in this aspect. There is, however, another side to Glanvill's passionate partisanship in the cause of the new experimental philosophy, more strictly philosophical in character, which deserves to be noticed. This is shown most clearly in a polemical exchange he engaged in with one Thomas White, a Roman Catholic priest and controversialist, who published an attack upon Glanvill's *Vanity of Dogmatizing* entitled *An Exclusion of Scepticks from all Title to Dispute*.[14] White, a die-hard Aristotelian, formidably accomplished in the peripatetic art of disputation, attacks Glanvill's "scepticism" from the standpoint of his own rationalist-Aristotelian principles, in particular the Aristotelian theory of "science." It is fortunately not necessary to follow out the whole argument, for the issue between them conveniently reduces itself to a fundamental and irreconcilable difference about the proper definition of *definition*.

The clash arises directly out of a discussion about causality. Glanvill has proposed a very Humean view of causality, which White attacks on the ground of his own thoroughly rationalist account of definition. Thus White:

> The twentieth Chapter [of Glanvill's book] renders manifest the eminence of Peripateticism above all other Methods, by its very impugnation of it. For, it assumes, it cannot be known that one thing is the Cause of another, otherwise than because they are found together: which we deny not to be an occasion of suspecting, but no Argument of Causality; for, if nothing else be clear, 'twill be still unknown, which of the too is the Cause, which Effect.

And having thus exposed the logical difficulty inherent in the "constant-conjunction" formula, White goes on to show how it can be resolved by the peripatetic theory of science. The peripatetic solution is, simply, to declare that to be "*the cause*" which is laid down as a basic definition (or postulate) of a given system of scientific discourse, and that "*the effect*" which can be deduced by necessary consequence from that definition. In his own words:

[14] Joseph Glanvill, *Scire tuum nihil est*: or, *The Authors Defence of The Vanity of Dogmatizing; against the Exceptions of the Learned Tho. Albius in his Late Sciri.* Appended to *Scepsis Scientifica* (London, 1665). My quotations are taken from the English translation of White's *Sciri*, which appeared in the same year (1665) as the Latin original.

But, the Peripateticks conclude not A. to be the cause of B. till, *defining both, they find, out of their very Definitions, that A cannot be, but it must follow out of its intrinsecals that B is.* For example, a Peripatetick collects that Fire is the Cause of Heat; because Heat is nothing else but Atoms flowing from Fire: and on the other side, he knows that Fire cannot exist, but it must send out such particles. (Pp. 74-75.)

To which Glanvill replies as follows:

Causalities are first found out by concomitancy, as I intimated. And our experience of the dependence of one, and independence of the other shows which is the Effect and which the Cause. *Definitions cannot discover causalities, for they are formed after the Causality is known.* So that in our Author's instance, a man cannot know heat to be the Atoms of Fire, till the Concomitancy be known, and the efficiency first presumed. The question is then, How Heat is known to be the effect of Fire? *Our Author answers, by its definition. But how came it to be defined?* The answer must be, by the concomitancy and dependence; for there's nothing else assignable.[15]

Certainly, Glanvill is saying, it is all a matter of definition. But *how came it to be defined?* That simple question of Glanvill's points, with uncommon force, the seventeenth-century displacement of the rationalist-Aristotelian theory of science by the empiricist theory of science of the new experimental philosophy. For the rationalist-Aristotelian it is the *rationality* of "a fact" that is paramount—its "derivability," that is, from the premises of a given system of discourse, its logically necessary place in a given rational system. It is the *rationality* of a fact, indeed, that establishes its *factuality.* And when he is pressed to answer the question, "But how came it to be defined?"—how, that is, did he arrive at his premises, those first propositions from which the "factual" proposition is derived?—he answers, simply, as Aristotle had answered: by "rational intuition," which is "an originative source of scientific knowledge."[16] To the empiricist this is, of course, not an answer but a kind of outrage. For him the factuality of a fact is established, not by its "derivability" or any such "empty" rationalist criterion, but by its "empirical verifiability."

[15] *Defence of The Vanity of Dogmatizing*, pp. 69-70.

[16] Aristotle, *Analytica Posteriora*, 88b, 35, in *Works* (Oxford, 1928), Vol. I.

To adopt a modern empiricist's phrasing,[17] "some possible sense-experience should be relevant to the determination of its truth or falsehood" if it is to count as a fact at all. And "rational intuition" is to the empiricist nothing but an empty formula—a disingenuous way, he would argue, of concealing the peripatetics' dearth of genuinely empirical material, out of which, and out of which alone, true definitions can be "made." What does it profit a scientist, the empiricist asks in effect, that a so-called physical proposition should have a logically necessary place in a so-called physical system when the premises of that system are empirically false? And the reason that they *are* for the most part false in the peripatetic physics is, as Francis Bacon had said, that "nothing duly investigated, nothing verified, nothing counted, weighed or measured, is to be found in [their] natural history." And the reason for this in turn is to be sought in their hopelessly imperfect methods of observation: "What in observation is loose and vague, is in information deceptive and treacherous." It is because their methods of observation are so unsystematic, casual, "vulgar"—as the Baconian empiricists never tire of pointing out—that their physical propositions fail to qualify as statements of fact at all. And so it becomes, in effect, the grand claim of the new science to have changed the meaning of the word "fact" in physics: a factual proposition, whatever its *logical* character may be—whether, that is, it is a premise or a consequence—*must* be empirically verifiable; and if not empirically verifiable, then not factual at all.

This, then, is the philosophical import of Glanvill's question to Thomas White, "But how came it to be defined?" What he misses, however, is the real force of White's objection to the Humean-empiricist account of causality. If, White argues (unanswerably), we knew nothing but the observed "concomitancy," the "constant conjunction," of phenomenon A (fire) and phenomenon B (heat), we should never be able to say even so much as which is "the cause," which "the effect," let alone establish anything in the nature of a necessary connection. The causal connection *can* only be made a matter of definition—we define "the cause" in such a way that "the

[17] A. J. Ayer's in *Language, Truth and Logic*, 2nd ed. (London, 1946), p. 31.

effect" necessarily follows "out of its intrinsecals"—because there is no other way in which it can be affirmed at all. And Glanvill himself falls into a serious confusion when he speaks of "the concomitancy *and dependence*" of the phenomena in question—as if both, equally, were matters of observation. The "concomitancy" may be so, but the "dependence" distinctly is not: the "dependence" is a relation, and as such, an object of the rational intellect, not an object of sense-experience. Consequently, Glanvill's crucial statement, that "our [sense] experience of the dependence of one, and independence of the other shows which is the Effect and which the Cause" stands condemned as an *ignoratio elenchi*; and it is this logical weakness in Glanvill's empiricist account of causality that White is intent upon exposing. White, in short, makes causality a matter of definition—a matter, that is, of laying down "the cause" as a definition and drawing out "the effects" as logical consequences of that definition—because he wishes to affirm the rational character of all scientific knowledge, scientific knowledge in its character as a rational system, as (in his own striking phrase) "a long chain of discourse." Francis Bacon, we remember, did not need to be reminded of the rational aspect of empirical science: "our road . . . ascends and descends, first ascending to axioms, then descending to works"; and these ascents and descents are, for Bacon, operations of the rational intellect. But this comprehensive view of scientific knowledge has been lost to Glanvill, as his account of causality shows; and therefore White's emphasis on the aspect that Glanvill is so entirely incognizant of, though itself one-sided, is nevertheless not gratuitous.

England and the Louisiana Question

By Bradford Perkins

In 1801 the Pitt government in England and the Federalist regime in America fell from power. A rapprochement which had been building since the Jay-Grenville treaty of 1794 seemed to be threatened, particularly since the new president was widely regarded as a near-Jacobin and friend of France. But Jefferson on the one hand and the Addington government on the other showed that they were not inclined to abandon the ground which had been gained since 1794. Relations were improved by the settlement of the tangled affairs of the Jay treaty commissions negotiated by Rufus King, the American Minister at London. In the spring of 1803 the climax of the Louisiana question provided additional evidence of Anglo-American comity.

France had been seeking the return of Louisiana for some time, and in 1798 rumors of a retrocession caused a number of Americans to advocate a "strike first" policy and evoked from Lord Grenville, Pitt's Foreign Secretary, a statement that Britain would welcome an American descent of the Mississippi.[1] However, it was not until the autumn of 1800 that Spain finally promised to deliver up the territory. This agreement was supposed to be kept secret, but its general outlines were soon known. Lord Hawkesbury, Grenville's successor, discussed the subject with Rufus King in June, 1801, when it seemed probable that the Floridas as well as Louisiana were to become French property. The Foreign Secretary, who regarded this as a serious threat to Canada and the West Indies, hinted that Britain might have to undertake preventive occupation of the Floridas at least. King immediately responded with standard American doctrine, "taking for my text the observation of Montesquieu, 'That it is happy for trading Powers that God has permitted Turks and Spaniards to be in the world since of all nations they are the most proper to possess a great Empire with insignificance.'" In other words, said King, "we are content that the Floridas remain in the hands of

[1]Memorandum of September 22, 1798, *Rufus King Papers*, New-York Historical Society, LXXIII.

Spain, but should be unwilling to see them transferred except to ourselves."[2] The proposed British expedition was not mentioned again during the few months before the end of the war.

Reports of a Franco-Spanish treaty reached the United States from so many quarters in the spring of 1801 that by May, Madison was able to afford the luxury of returning a report forwarded by Alexander Hamilton without a word of thanks, unkindly adding that the data "had been previously signified to this Department from several sources."[3] But it was not until fall that Madison received a copy of the agreement, forwarded to him by Rufus King, which definitely confirmed the rumors that had been circulating. This may or may not have come to him from British sources, but it was certainly owing to English good offices that King was able to inform his superiors of French assurances to Britain that the expedition to depart for America had in view the reconquest of San Domingo and not the establishment of a new domain in the American interior.[4] This apparent respite was short-lived, however, for the administration soon received information which indicated that Bonaparte had not lost sight of the second prize,[5] and Jefferson and Madison were forced to turn their attention to the problem.

Jefferson's point of view was essentially a continuation of the policy which he had helped to formulate as Washington's Secretary of State. As early as March, 1802, in frank and open conversation with the British chargé, Edward Thornton, he stated that he had warned the French and Spanish representatives in Washington that "the inevitable consequences" of French occupation of Louisiana "must be jealousy, irritation, and finally hostilities."[6] Soon the President composed the long, private letter to Robert R. Livingston, American Minister to France, that is among his more famous com-

[2]King to Secretary of State, June 1, 1801, *Records of the Department of State, Despatches from Great Britain*, National Archives, IX.

[3]Madison to Hamilton, May 26, 1801, *Alexander Hamilton MSS.*, Library of Congress, LXXXIII.

[4]King to Secretary of State, November 20, 1801, *Department of State, Despatches from Great Britain*, IX.

[5]Thornton to Foreign Secretary, March 6, 1802, *Foreign Office Papers*, Public Record Office, *FO* 5/35.

[6]Ibid.

positions; in it he stated that "The day that France takes possession of N. Orleans fixes her sentence which is to restrain her forever within her low water mark. . . . From that moment we must marry ourselves to the British fleet and nation."[7] In a covering letter handed to Pierre S. du Pont de Nemours, a Frenchman who was to carry the message to Livingston, Jefferson added in characteristic vein that Bonaparte's plans would "cost France . . . a war which will annihilate her on the ocean, and place that element under the despotism of two nations, which I am not reconciled to the more because my own would be one of them."[8] By summer, Jefferson was stating this threat even more openly. At public gatherings, Thornton reported, he "makes no scruple to say, that if . . . the United States should be unable to expel the French . . . they must have recourse to the assistance of other powers, meaning unquestionably Great Britain." The chargé noted that administration papers as well as the President himself excoriated the "usurpation of Bonaparte"; the whole situation convinced him that although the Republican party might not be cured of its "bitterness against Great Britain . . . its predilection for France scarcely exists even in the name."[9] A short time later Thornton suggested that Jefferson's attitude might be further improved if London periodicals could be induced to include complimentary references to his talents, particularly in the field of science.[10] What more the chargé can have hoped for from the President at this time is a mystery. Their contact was already so close that the French representative, Louis Pichon, was alarmed.

What appeared to be presidential indiscretions were probably actually calculated parts of a general policy. The administration wanted to make it clear to France that even the most pacific of American governments would resist the transfer of New Orleans by any means that came to hand; the hints of an alliance with Britain

[7]Jefferson to Livingston, April 18, 1802, Paul L. Ford, ed. *The Writings of Thomas Jefferson*, VIII (New York, 1897), 145. Madison had already expressed the same idea in less striking language; Madison to Livingston, September 28, 1801, quoted in Irving Brant, *James Madison, Secretary of State* (Indianapolis, 1953), p. 71.

[8]Jefferson to du Pont de Nemours, April 25, 1802, Andrew A. Lipscomb, ed. *The Writings of Thomas Jefferson*, Memorial Edition (Washington, 1905), X, 317.

[9]Thornton to Foreign Secretary, July 3, 1802, *FO* 5/35.

[10]Thornton to Foreign Secretary, August 3, 1802, ibid.

were part of this warning. As yet, however, no approaches were to be made to Great Britain. Rufus King received no instructions to consult the British government, and he actually learned of the administration's attitude only when Hawkesbury permitted him to read Thornton's dispatches. In 1802 Jefferson and Madison still hoped to negotiate with France or Spain, and they held the British card in reserve. In May, Madison instructed Livingston to warn France that "the worst events are to be apprehended" if New Orleans should change hands. France could prevent such a development either by agreeing to leave Spain in possession or by selling New Orleans and the Floridas to the United States.[11] Thus by the end of 1802 Jefferson and Madison had formulated American policy —a threat to oppose French occupation of Louisiana by force coupled with an offer to settle the problem by diplomacy.

Britain's position was by no means so clearly established during 1802. For Jefferson and Madison the problem was fairly simple and obviously of overriding importance, but for Addington and Hawkesbury, Louisiana was only one facet of a larger problem, or even two larger problems—relations with France and with America. The Addington government worked for good relations with the United States. But for most of 1802, at least, the Cabinet hoped that peace with Bonaparte could be made to last, and this hope affected its thinking and attitudes. As a result, British policy drifted.

William Cobbett, recently returned from several years as a pamphleteer in America, and William Windham, a former Cabinet member under Pitt and the self-appointed political heir of Edmund Burke, attempted to prod the government into action. Early in 1802 Cobbett stated his position in one of the first issues of the *Annual Register*, and he maintained it with typical pertinacity until the very end. The editor believed that the threat to Canada and the West Indies and the economic importance of Louisiana (which he proclaimed to be potentially the best cotton area in the world) were sufficient reasons in themselves for Britain to block French designs. But to his mind there was a third and even more important factor, the effect of retrocession upon the domestic politics of the United

[11]Madison to Livingston, May 1, 1802, *Department of State, Instructions to Ministers*, VI.

States. France, he said, wanted possession of Louisiana "to form a balance against that military and naval influence which Great-Britain has by the possession of Canada, New Brunswick, and Nova Scotia," a balance which would enable her to obtain "a domineering influence in the councils of the federal city, which councils are already but too much disposed to favor those plans, which she has laid for destroying the commercial and naval preponderance of England."[12]

In the fall Cobbett enlisted the support of William Windham. Windham wrote directly to Addington, arguing that there was little difference between refusing to deliver up Malta to France and preventing the transfer of Louisiana to the same power. If Britain were willing to risk the consequences of the first, as the Addington government held that she must, she might as well risk those of the second, particularly since possession of New Orleans and Louisiana would give to France "nothing less than the command of two Continents." A small squadron and a regiment or two would suffice to forestall the French, a serious strategic threat would be ended, and the "counsels & good wishes [of the United States] would probably be completely engaged to us, by such an act of rescue." But the government must act promptly, for "It is really a point on which may turn the fate of the world."[13]

Early in 1803 a staunch Addingtonian named George Orr, otherwise known only as the author of a slim paper on the techniques of chimney sweeping, joined Cobbett and Windham in urging the government to take positive action. In a pamphlet entitled *The Possession of Louisiana by the French Considered*, Orr pointed out the political importance of Louisiana to England and America, emphasized the cultural and racial ties between the two countries, and urged a general political alliance which should begin with joint action to prevent French occupation of New Orleans.[14]

Despite the fire which fell upon them from several directions,

[12]*Cobbett's Annual Register* (London), I, 44-46 (January 16-30, 1802).

[13]Windham to [Addington], November 3, 1802, *Windham Papers*, British Museum, Add. MSS. 37881, 15-16.

[14]George Orr, *The Possession of Louisiana by the French Considered* (London, 1803), passim.

neither the government nor its newspaper supporters were willing to admit that there was anything in the situation which called for action. The *Times*, which apparently was chosen to duel with Cobbett, attempted to put a gloss of high statesmanship on the British government's inactivity. In May, 1802, it commented,

> The rapid progress which America has made from the advantageous circumstances of [neutrality] . . . made it necessary for this Country to keep a watchful eye on her proceedings; whereas by bringing the restless power of France to her very back, we shall be relieved from our anxious and active vigilance, as the Americans will be fully employed in attending to the designs of their new, ambitious, and enterprising neighbors.[15]

The *Times*'s language in the early months of 1803 differed from that of the previous year only in that the anti-American note had disappeared. In one typical editorial it repeated that "The usurpation of France in Louisiana . . . may . . . promote a cordial and brotherly re-union between our late Colonies and this Country." After considering this topic at some length, the paper concluded, "The affection and kindness of the Greek Colonies for the Metropolitan Country, after centuries of complete independence, fill some of the most delightful pages of history."[16]

Both positions, that of the *Times* and that of Cobbett and his allies, were somewhat wide of the mark. The disputants did not realize that no American government would tolerate French occupation of New Orleans. Unlike Cobbett, however, John Walter, the editor of the *Times*, failed to see that Britain would get little thanks for playing a negative role when the presence even of a few men-of-war might have decisive importance. Walter attempted to characterize as a positive, intelligent policy that which was really the fruit of governmental lassitude or, at best, cynicism. For despite the cannonading on a number of fronts, Lord Hawkesbury refused to de-

[15] *Times* (London), May 13, 1802. The paper added, "It was on this principle that some of our Politicians of the old school entertained the opinion, that we might well attribute the loss of the American Colonies to our retention of Canada after the seven years war."

[16] Ibid., February 8, 1803.

fine British policy. He could feel little concern about the interior of Louisiana, once commenting that "it must be a very long time before a country quite a wilderness could become of any considerable value."[17] Rufus King was unable to get him to budge; not a single instruction sent to Thornton in 1802 mentioned Louisiana in detail, and there is no evidence that the members of the government considered it at London. To avoid difficulty the Louisiana question was excluded from the discussions at Amiens.

The whole situation was transformed when, late in 1802, the Spanish Intendant at New Orleans issued a proclamation revoking the right of deposit. If enforced this decree would cripple the trade of the Western states; furthermore, by clearing the title of encumbrances it seemed to foreshadow the transfer of the region to France. There was an explosive outburst of public sentiment when the news reached the American seaboard a month or so later. Phineas Bond, the British consul at Philadelphia, soon reported to London:

> Scarcely any Thing has happened since the Revolution . . . which has so much agitated the minds of all Descriptions of People in the United States as this Decree; the democratic Party hesitates not to reprobate in the most acrimonious Terms the evil Effects of a temporizing Policy in this Government upon this Occasion; while those who have always seen and known the great Advantages to arise from a close Connexion and Friendship with Great Britain, date, from this moment, the first Symptom of an universal Disposition to establish a firm and powerful Alliance between Us.[18]

Thornton endorsed Bond's report, adding that "I find men, formerly the most vehement in their politics, asserting in the most unqualified terms the necessity of an union among all the members of the civilized world to check her [France's] encroachments, and to ensure the general tranquillity."[19]

Jefferson was alarmed. Rumors of war, or at the very least an armed *coup de main* carried out by Westerners under Federalist auspices, were common topics of conversation. The President and Madison acted promptly and wisely, announcing the appointment

[17]Memorandum of November 25, 1801, *King MSS.*, LXXIII.

[18]Bond to Foreign Secretary, January 2, 1803, *FO* 5/39.

[19]Thornton to Foreign Secretary, January 3, 1803, *FO* 5/38.

of James Monroe as a special emissary to France. This nomination was made because of Monroe's great reputation in the West, and, as Jefferson frankly stated, it was aimed at reducing "the fever into which the Western mind is thrown by the affair at N. Orleans stimulated by the mercantile, and generally the federal interest."[20] The Federalists fought with all their might to prevent Senate confirmation of Monroe, but the appointment was approved by the narrow margin of three votes.

Edward Thornton wisely showed no pique at this new development, and he offered to hold the monthly packet to carry Monroe to Europe. Jefferson seemed pleased, so the chargé rather boldly asked whether Monroe would proceed to London if his mission to Paris ended in failure. Jefferson replied that no decision had yet been made, but he assured Thornton that the United States would never give up the right to use the Mississippi and "should they be obliged at last to resort to force, *they would throw away the scabbard*."[21]

To aid Monroe in his mission, which Jefferson and Madison hoped would result in the acquisition of New Orleans, a secret appropriation bill, authorizing the expenditure of two million dollars, was pushed through Congress. As the British chargé reported, the United States still hoped to acquire New Orleans "*in an honest way* (to use the expression of a Senator in the confidence of the Administration) that is by purchase." Thornton was by no means confident that this was possible, but as no "immediate member of the government" broached the subject of an alliance, he contented himself with saying in public that whatever country incurred the enmity of France "acquires by that act alone the friendship of Great Britain; and that, where the relations are so intimate as they are between her and the United States, this must be speedily followed by her active co-operation."[22]

Actually, although it was a closely guarded secret, the administration was seriously considering alliance with England if Monroe and Livingston were rebuffed at Paris. Jefferson raised the subject at a

[20] Jefferson to Monroe, January 10, 1803, *James Monroe MSS.*, Library of Congress, VII.

[21] Thornton to Foreign Secretary, January 31, 1803, *FO* 5/38.

[22] Thornton to Foreign Secretary, March 9, 1803, ibid.

Cabinet meeting in April, and a majority of the Cabinet were willing to bind the United States not to make a separate peace.[23] Instructions were sent to Paris at the end of April. Madison told the envoys that if France seemed determined on war or had "formed projects which will constrain the United States to resort to hostilities," they were to open conversations with the English. Notwithstanding American reluctance to become entangled in European politics, said the Secretary, "the advantages to be derived from the co-operation of Great Britain . . . at this period . . . are too obvious and too important to be renounced." Since the administration could have no idea of the "price which she may attach to her co-operation," Livingston and Monroe were given only general instructions in this regard. A pledge not to make a separate peace and, despite Cabinet reluctance, special concessions to British trade in Louisiana were approved, but English occupation of the trans-Mississippi territory was "altogether repugnant to the sentiments and to the sound policy of the United States" and would not be tolerated. Madison went on to say that it was hoped that "sound calculations of interest, as well as a sense of right, in the French Government, will prevent the necessity of using the authority expressed in this letter." If France only insisted upon ending the deposit, Livingston and Monroe were directed to open consultations with the British while awaiting a congressional decision between peace and war. But "if France should avow or evince a determination to deny the United States the free navigation of the Mississippi, your consultations with Great Britain may be held on the ground that war is inevitable."[24]

Meanwhile, there had been a number of developments in Europe. Reports that the First Consul was determined to take over the Floridas as well as New Orleans, despite the dangerous situation of the forces in San Domingo, threw Robert Livingston "in[to] the utmost consternation." The American, who had previously ignored Lord Whitworth, the British representative at Paris, began to have conversations with him which were designed to, and did, arouse "a

[23]Memorandum of April 8, 1803, Franklin B. Sawvel, ed. *The Complete Anas of Thomas Jefferson* (New York, 1903), pp. 218-19.

[24]Madison to Monroe and Livingston, April 18, 1803, *Department of State, Instructions to Ministers*, VI.

considerable degree of jealousy" in Talleyrand.[25] These visits, although sedulously repeated, somewhat baffled Whitworth, who reported, "I have certainly of late found Mr. Livingston more than usually cordial, and although not very confidential yet professing that his instructions strictly enjoined him to be so."[26] Whitworth's dispatches reached Hawkesbury shortly before John Hookham Frere reported from Madrid that the American representative there, Charles Pinckney, had similarly approached him and even hinted at joint Anglo-American action to block Bonaparte's plans.[27]

A month later the Foreign Secretary received important observations and suggestions from Edward Thornton in Washington. Thornton's dispatches during this whole period reflected his alert mind, skillful handling of Jefferson, and long observation of the American scene. To these was added the virtue of a sprightly style, and this combination of factors must have made the reports interesting to even so languid a mind as that of Lord Hawkesbury. Until early in 1803, perhaps because of his low rank, Thornton had not presumed to suggest policy to His Majesty's Government. Toward the close of 1802, however, the rising tide of anti-French opinion in America and widespread advocacy of an expedition to seize New Orleans caused him to change his attitude. On January 3, 1803, he wrote Hawkesbury that Britain was facing a tremendous opportunity, yet one which it would cost her little to develop.

> I should hope, My Lord, that by having some share in the delivery of this Island of New Orleans to the United States, which it will be impossible to keep from them, whenever they chuse to employ force, His Majesty's Government may hereafter attach still more this country to our interests, and derive all the advantage possible from the intercourse with that important part of the world.[28]

Thornton's dispatch, the reports from Whitworth and Frere, and Rufus King's obvious concern finally prodded the Addington gov-

[25]Whitworth to Foreign Secretary, January 4, 1803, *FO* 27/67.

[26]Whitworth to Foreign Secretary, February 7, 1803, ibid.

[27]Frere to Hawkesbury, Private, February 25, 1803, *The Liverpool Papers*, British Museum, Add. MSS. 38238, 88-91.

[28]Thornton to Foreign Secretary, January 3, 1803, *FO* 5/38; endorsed received February 13, 1803.

ernment into wakefulness. Three days after the receipt of Thornton's letter Hawkesbury encountered Lord Malmesbury at one of the King's levees. He told the crusty old diplomat that the Americans "were much alarmed, and drawing towards us." Possibly they had already seized New Orleans, a development which "would enable us to come forward with great advantage." Malmesbury was interested, but he urged caution—he could not forget that the Americans had gained independence by a revolution against the British Crown. Hawkesbury heard him out, answered politely, but made no promises.[29]

Since a renewal of the war with France seemed inevitable—the first militia calls were issued early in March—many of the government's objections to the constantly reiterated arguments of Cobbett were nullified. If the United States seized New Orleans, as it seemed likely to do, Britain could of course "come forward with great advantage." There was, however, a more promising course, the Thornton refinement of Cobbett's original scheme. At small cost England could take Louisiana from the weak Spanish regime and hand it over to the United States. Britain's interest would be served in two ways. All chance of a French base on the American continent would be brought to an end, whereas if Britain waited for the United States to act it was still possible that Bonaparte would be able to establish himself in the area along the Gulf coast. Furthermore, the United States could not fail to appreciate British assistance; she might offer special commercial concessions in the newly acquired territory and would certainly be more sympathetic toward Britain as war recommenced.

Only three weeks after the receipt of Thornton's dispatch, a new British policy was put into operation. In a letter obviously based on confidential discussions with the Foreign Secretary, Rufus King told Robert Livingston that England was considering a descent upon Louisiana. What did Livingston think of this?

> Should we like to see the English at New Orleans? not with the view of keeping it, but to prevent its going into the hands of France—or perhaps to assist us in acquiring Title to, and the possession of it?—If you are

[29] James H. Harris, Earl of Malmesbury, ed. *Diaries and Correspondence of James Harris, Earl of Malmesbury* (London, 1844), IV, 203.

authorised to negotiate a purchase, would not the occupation by the English benefit your bargain, it being well and previously understood that if we obtain the title they would give us the Possession?[30]

Lord Malmesbury, who had some influence with the government, still had doubts about the wisdom of the new policy. In a letter to a Cabinet member he complained about "the giving Louisiana to America." Malmesbury hated Americans, " a mean illiberal, shabby people," and still believed that the best policy was to encourage a quarrel between France and America.[31] Nevertheless, the government persevered. Early in April, King for the first time hinted at the British shift in a report to the Secretary of State, with whom he was by this time not on the best of terms. The envoy told of a conversation with Addington during which the premier said that if war came "it would perhaps be one of their first attempts to occupy New Orleans." The Minister assured King that if Britain took over the area it would be merely to keep it out of the hands of France. Britain regarded American possession, he said, as the best solution to a difficult problem.[32]

The policy chosen by Addington and Hawkesbury was, from all points of view, the wisest that Britain could adopt, particularly because it recognized the most important factor in the equation, that the United States would fight rather than see a new power take over Louisiana. Doubtless the most sanguine hopes for American gratitude would have been disappointed, but delivery of New Orleans could not have failed to have a powerful effect in the United States and, furthermore, it was as certain to involve America in conflict with France as the old, "hands off" policy. The decision was an imaginative one, a rarity in Addingtonian annals, and it also dem-

[30]King to Livingston, March 11, 1803, *King MSS.*, LV.

[31]Malmesbury to Pelham, March 20, 1803, *Pelham MSS.*, British Museum, Add. MSS. 33110, 43.

[32]King to Secretary of State, April 2, 1803, *Department of State, Despatches from Great Britain*, XI. Madison easily saw that self-interest was at the root of the British offer to seize New Orleans; it was, he wrote, "calculated to decoy us into the war." (Madison to Monroe, Private, May 31, 1803, quoted in Brant, *Madison, Secretary of State*, p. 131.) On the other hand, he did not reject the offer for this reason, and even hoped that the threat it posed would strengthen the diplomatic armory of Livingston and Monroe. Before the American government could follow up this new approach, word reached Washington that Louisiana had been sold to the United States.

onstrated the favorable attitude of the British government. If Addington and Hawkesbury had looked upon America as a spiteful brat which might at any moment turn upon its parent, they would never have adopted this policy, nor indeed would it have had any point. Their decision shows a clear understanding of the situation and a realization that it was possible to work in concert with Thomas Jefferson.

The only trouble with British policy was that it developed too late. On April 11, just as news of James Monroe's arrival at Le Havre reached Paris, the First Consul directed Barbé-Marbois to arrange the sale of Louisiana. Two days later discussions were opened, and on the fourteenth Lord Whitworth accurately reported to his government that "America is the first to reap the fruits of our discussion with this Government, in consequence of which Mr. Munroe finds the difference which occasioned his mission nearly adjusted."[33] There was some haggling, with Livingston alone and with both Americans, but shortly after the end of the month the three documents which made up the Louisiana Purchase agreement were signed.

The transaction passed almost unnoticed in London newspapers, whose columns were full of news of the resumption of hostilities between England and France. When rumors first reached London, the *Morning Chronicle*, which had earlier expressed confidence that "The Americans are not base enough to buy a peace from France,"[34] publicly doubted that the measure had actually taken place. The *Chronicle* soon ate its words—in a very small item. The other papers commented in about equal detail, only the *Morning Post* showing any enthusiasm. Cobbett, who still had his sights trained on Lord Hawkesbury, announced his satisfaction that America was to get Louisiana, but he blamed the Foreign Secretary for acting so slowly that Britain got no credit while France gained great influence in America and several million pounds to boot.[35]

[33] Whitworth to Foreign Secretary, April 14, 1803, *FO* 27/67.

[34] *Morning Chronicle* (London), April 25, 1803.

[35] "To the Rt. Hon. Ld. Hawkesbury, &c.", *Cobbett's Annual Register*, III, 801-10 (June 4, 1803). For other comment, see *Morning Chronicle*, May 18 and 20, 1803; *Morning Post* (London), May 20, 1803; *Times*, May 18, 1803; *Sun* (London), May 20, 1803.

A number of British officials expressed approval of the transfer. Lord Hawkesbury, doubtless stifling a bit of disappointment and yet gratified that French designs in America were at an end, drafted a cordial letter to Rufus King informing him of "the pleasure with which his majesty has received this intelligence."[36] A few months later Alexander Baring told Timothy Pickering (as the Yankee politico remembered it in 1821) that "his government would rather have paid the purchase money out the public treasury, than not have the transfer to the U. States effected."[37] And James Monroe, who certainly had no deep affection for Britain, reported toward the end of the year that the English reaction was generally favorable; "Castleray" and Hawkesbury had expressed special pleasure to him in informal conversations.[38]

Privately, however, many Britons must have shared Cobbett's regret that England had not been able to gain positively as well as negatively from the controversy between America and France. Hawkesbury and Addington moved too slowly, and Bonaparte, seeing that Britain was not prepared to give way on Malta and other issues between them, accepted the gage of battle and disposed of Louisiana as one means of clearing the decks for action. Had the Cabinet acted with greater speed, it would not have been possible for Robert R. Livingston to claim, as he did in the fall of 1803, that "Tho' the war had much effect in accelerating the business, we derived no aid in the transaction from the interference of Britain."[39]

News of the Louisiana Purchase, borne from Europe by Rufus King, who ended his London mission at this time, caused a storm of political activity in the United States. Following some struggle with his constitutional scruples, Jefferson convened Congress, which after a sharp debate approved the bargain and provided the purchase money. "The enlightened Government of France," the President told the legislators when they first met, "saw with just discernment,

[36]Hawkesbury to King, May 19, 1803, *King MSS.*, LV.

[37]Memorandum of December 9, 1821, *Timothy Pickering MSS.*, Massachusetts Historical Society, LI, 212. Pickering also recorded that a friend in London at the time of the Purchase heard Baring say the same thing.

[38]Monroe to Madison, Private, November 25, 1803, *Monroe MSS.*, IX.

[39]Livingston to General John Armstrong, September 1, 1803, *Armstrong Papers*, Historical Society of Pennsylvania.

the importance of such liberal arrangements as might best and permanently promote the peace, interests, and friendship of both [nations]," and therefore sold Louisiana to the United States.[40] Not all the members of Congress saw it this way. "The King of Great Britain . . . at this crisis I take to have been by far the most able negotiator we had," said one Representative in the course of the debates.[41] This was undoubtedly true, in the sense that Congressman Purviance meant it; the hardening of British policy toward France was an important factor in Bonaparte's decision to sell the territory to the United States. Everyone recognized, despite the words of Jefferson's message, that this had not been an act of benevolence on the part of the First Consul, and France gained little credit in America for its action. "I believe, sir," one Representative said without challenge from his fellows, "that there is not within these walls an admirer of the present Government of France."[42] Thus, if Britain's slowness to awaken to the possibilities of the situation deprived her of a chance to make political capital, so too did Bonaparte's obvious reluctance to sell Louisiana reduce the credit which he got in America when he finally decided to do so.

The Louisiana conventions provided for the transfer of American bonds to the government of France, but the First Consul had no desire to hold United States securities as an investment; he wanted cash. French banks declined to try to float such a huge bond issue in Europe. Therefore, at the suggestion of Livingston and Monroe, the French government opened negotiations to sell the stock in England and Holland through Hope & Company of Amsterdam and Francis Baring & Company of London.[43] The houses of Hope and Baring were the largest European handlers of American securities and thus natural candidates for the job. Although hostilities between

[40] James D. Richardson, ed. *Messages and Papers of the Presidents*, I (Washington, 1896), 358-59.

[41] *Annals of Congress, Eighth Congress, First Session* (Washington, 1852), p. 445.

[42] Ibid., p. 452.

[43] Thornton to Foreign Secretary, September 6, 1803, *FO* 5/38; G. Labouchère, "L'Annexion de la Louisiane aux États-Unis et les Maisons Hope et Baring," *Révue d'Histoire Diplomatique*, XXX (1916), 441-42; Ralph W. Hidy, *The House of Baring in American Trade and Finance* (Cambridge, 1949), p. 33; Barbé-Marbois to Livingston and Monroe, May 28, 1803, *Treasury Department, Louisiana Papers.*

England and France had already commenced, Alexander Baring, the future Lord Ashburton but then a cadet of the London house, traveled to Paris in company with P. C. Labouchère of Hope & Company. The two bankers easily reached an agreement with Barbé-Marbois. Simply stated, it provided for an exchange of stock for specie—chiefly from England—in three installments. Baring and Hope agreed to pay fifty-two million francs for securities which had a face value of sixty million.[44]

Before going to the United States to receive delivery of the first portion of the stock, Alexander Baring stopped in London. He sounded out the Addington Ministry,[45] for the government's concurrence was vital if gold were to be exported from the country. The Cabinet agreed to allow the deal to go through, although it obviously violated the usual rules of mercantilism as well as British regulations governing trade with the enemy in time of war. Why did they do so? Doubtless two chief reasons were the desire to make doubly sure that Bonaparte got no foothold in North America and the wish to end the troublesome possibility that France might sell the stock in America and establish a fund with which to make military purchases. In addition, the house of Baring was already preeminent in London finance, and its desires carried great weight, even though most of the elder Baring's friends sat on Opposition benches in the House of Commons. Finally, the bankers were in effect buying the stock at 78½,[46] thus depriving Bonaparte of almost one quarter of the principal and all of the interest that the United States had agreed to pay him. Since these varied considerations probably influenced the British government, it would be dangerous to say that the permission extended to the house of Baring was basically an act of good will towards the United States. Nevertheless, relations with America were doubtless considered. The United States was a friendly nation; agreements concluded with Rufus King seemed to make closer ties a real possibility, and a fur-

[44]For the text of the agreement, see James E. Winston and R. W. Colomb, "How the Louisiana Purchase was Financed," *Louisiana Historical Quarterly*, XII (1929), 215-18.

[45]Thornton to Foreign Secretary, October 31, 1803, *FO* 5/38.

[46]Gallatin to Jefferson, August 31, 1803, Henry Adams, ed. *The Writings of Albert Gallatin* (Philadelphia, 1879), I, 151.

ther concession could certainly do no harm. This and other important factors justified granting an export permit even for so large an amount of specie as that which Baring proposed to ship to Paris.

Thus, by the sale of Louisiana, Bonaparte ended a serious quarrel with the United States and, with British connivance, gained a considerable installment of the sinews of war; at the same time, he ended for the moment all necessity of a military alliance between England and America. We cannot safely predict what would have happened if Bonaparte had made a different choice, if the autocrat of the Tuileries had decided to go through with his colonial venture or even merely to maintain title to Louisiana until a French victory in Europe should allow him once again to turn his attention to the trans-Atlantic arena. We do know, however, that to protect the entrepôt of the American West Jefferson was ready to join Britain in a war against France, and that the Addington Ministry would have listened to his proposals with a receptive ear. While Bonaparte's reversal of French policy scotched this project almost before it got started, it still has importance as a barometer of Anglo-American relations. Republican sympathies for France seemed no longer to exist. Jefferson was willing to promise Britain never to make a separate peace; the Federalists had never gone this far even during the undeclared war with France in the Adams administration. Particularly interesting is the fact that it was Jefferson himself who spoke of alliance in the strongest terms, for it was he, a supposed partisan of France, whose triumph in 1800 had caused doleful predictions in Britain and America. In 1798, during the quasi-war, Pitt and Grenville had offered the United States cannon for the defense of Charleston, naval vessels for a price, convoys, and other assistance; in 1803 Addington and Hawkesbury were ready to make the United States a gift, albeit a gift of twice-stolen property, of the American heartland. It would obviously be untrue to say that there was any philanthropy involved. In 1803 as in 1798 self-interest was at the root of national policy. Yet at both times the co-operation proposed would not have been considered had not relations between the two countries been untroubled by serious controversy.

Notes and Documents

Dekker, Segar, and Some Others

IN A NOTE on "Richard Vennar and *The Double PP*" in *The Papers of the Bibliographical Society of America* for 1949 (XLIII, 199-202) Phillip Shaw drew attention to the claim of Richard Vennar that he had written, at the time of the Gunpowder Plot, a "deuice in picture and verse, describing *a Papist Dormant, a Papist Couchant, a Papist Leauant, a Papist Passant, a Papist Rampant,* and *a Papist Pendant.*"[1] As shifty a man as any in his age, Vennar is not lightly to be believed, and Shaw argued that he was claiming for his own a pamphlet of 1606 entitled *The Double PP.* Issued without author's name, this is known to be Dekker's both from internal evidence and from the specially printed dedication to Sir Henry Cock found in the Britwell-Pforzheimer copy. It is true that Dekker's characters, in that section of *The Double PP* headed "A Papist in Arms,"[2] differ from Vennar's in number and in order. His ten papists are Couchant, Passant, Passant Gardant, Variant, Volant, Seminant, Salliant, Rampant, Umbreant, and Pendant in that order. But then Vennar might have been writing from memory or indulging in deliberate mystification.

Yet I am not convinced that Dekker's pamphlet is the one to which Vennar was laying his impudent claim. At what time in the year 1614 his *Apology* was published is not known, but if it appeared toward the end of the year he could have read a passage in *The Honestie of This Age*, entered on June 22, in which Barnabe Riche gave a full description of a book published "many yeeres sithens" and satirizing papists under cover of heraldic terms.[3] And

[1] *An Apology: Written by Richard Vennar, of Lincolnes Inne, abusiuely called Englands Ioy* (1614), p. 54. Ed. J. P. Collier in *Illustrations of Old English Literature* (London, 1866), III, 21-22.

[2] 1606 ed., sigs. C2-D2v. Ed. A. B. Grosart in *The Non-Dramatic Works* (London, 1884-1886), II, 172-79.

[3] 1614 ed., pp. 29-30; reprinted for the Percy Society, XI (London, 1844), ed. Peter Cunningham, see pp. 43-45.

the kinds of papists whom Riche enumerated from his memory of this book are of seven varieties: Rampant, Passant, Volant, Regardant,[4] Dormant, Couchant, and Pendant.

Between Vennar's six classes and Dekker's ten, four only are in common: the Papists Couchant, Passant, Rampant, and Pendant; but Vennar's six classes and Riche's seven have in common not only these four but a fifth, the Papist Dormant. (Vennar's sixth class, the "Papist Leauant," he seems to have invented for himself.) That he should have hit on the Papist Dormant without reference to Riche seems most unlikely. It is true that Vennar claimed to have been inspired by the Gunpowder Plot, that Dekker was so inspired, and that the pamphlet which Riche was remembering was not; but in his general attack on papists Riche referred to "these diuelish practises . . . of gunne-pouder traynes," and there is no difficulty in supposing that Vennar, appropriating to himself a pamphlet to which he had no claim and which he may never have seen, applied it to the most suitable event in his life to which it could be applied.

The pamphlet to which Riche referred he described in these terms: "I remember that many yeeres sithens, I sawe a fewe printed lynes, intituled, *The Blazon of a Papist*, written by some *Herault* of *Armes*, that had pretily contriued a *Papist* in the compasse of *Armory*." On March 22, 1587, Thomas Purfoote entered in the Stationers' Register a work with this title and in pursuance of his entry proceeded to publish *The Blazon of Papistes. Imprinted by Thomas Purfoote, and are to be solde at his shoppe without Newgate*.[5] The dedication to the Queen is signed: "Your Maiesties most humble Seruant & Pursuyuant at Armes, William Seager, alias Portcullis." The language of blazonry came naturally to Segar, for he was Portcullis pursuivant, and was soon to become Somerset herald.

Here is the source of Dekker's "invention." Segar's introductory "Poem Ænigmaticall" suggested to him his general title and gave him his "Riddle on the double PP.";[6] and Segar also provided him with nine of his ten characters and with his "Summa." The order

[4] In Dekker and in Segar (see below) Passant Gardant.

[5] Sigs. A-D4. The pamphlet is printed on half-sheets with broad imposition. The Bodleian copy appears to be unique.

[6] 1606 ed., sig A2; Grosart, II, 161.

of treatment is the same in both.[7] Segar even gave him his metre. All that Dekker did in this section of his pamphlet was to add a new character and to blow up to two the one stanza which Segar devoted to each papist. A characteristic example may be cited. In Segar (C2):

> A papist Salliant is a publique Foe,
> A Malecontent, a hoper after harmes,
> A Libeller, and one where ere hee goe,
> That harkens after vprores and alarmes.
> Prest with the first to salie foorth in armes,
> To rauish, robbe, and rauine fully bent,
> Making Religion cloake of his entent.

And in Dekker (D1):

> A *Papist Salliant* thus creepes vp: hee's sicke
> Of *Sloth* and *selfe-opinion*, and (being poore)
> Turnes to a male-contented *Catholick*;
> Railes at the State, cause it regards no more
> Men of his ranck, and vowes hee will steale o're
> And doe! oh! yet staies still: he sets vpon
> The Court with *Libells*: Stabbing it, hees gon.
>
> Hee loues the *Lee-shore* well, for there he lyes
> And houers (all vnrigd in Sight) to stay
> Till ciuill, or vnciuill tempests rize,
> For then sallies he forth, then is his day:
> Rapes, robberies, and sackt Cities are his prey;
> To feede his owne lust, hee'le his father choake,
> Yet laps all this within *Religions* Cloake.[8]

The one character which Dekker added to Segar's nine is that of "A Papist Vmbreant. Or The Moldwarp."

> hees a Sprite
> That deales in *Fire-workes*: *Vaults* are his delight,
> Where for his close *Traynes*, hell does him prefer
> To be *Arch-Enginist* to *Lucifer*.

[7]The order is as in Segar's dedication and "Summa"; but as the Bodleian copy of *The Blazon* is now bound up, the characters on sig. C1 appear in the order: Variant, Salliant, Seminant, Volant.

[8]Two stanzas in rhyme royal, not (as Shaw says) a fourteen-line stanza.

The reference to the Gunpowder Plot is clear. His pamphlet was entered on December 9, 1605, little more than four weeks after the public announcement of the Plot, and in his haste to make the best of this sensational news Segar was not the only author he made use of.

F. P. Wilson

Attendance Trends and Absenteeism in the Long Parliament

"A THIN HOUSE" was one of the most common descriptive labels given to the House of Commons during the English Revolution. Whitelocke, Ludlow, Holles, and May, to mention but a few of the contemporaries, all commented on the poor attendance at the parliamentary debates.[1] At times it proved difficult for the party leaders to muster up enough members to constitute a quorum.[2] Frequently, especially during hostilities, the members returned to their counties on official business, but often they were vacationing "in the country," enjoying the waters of Bath, or seeking relief from the hot and disease-ridden metropolis.[3] During the summer months the Lower House was plagued with leave requests and excuses for non-attendance. Although Parliament devised extraordinary disciplinary measures such as fines, roll calls, and disablements to counteract these chronic practices, from the King's Speech in 1640 to Pride's Purge in 1648 absenteeism was an ever-present problem in the House of Commons.[4]

[1]Bulstrode Whitelocke, *Memorials* (Oxford, 1853), II, 173, 374; C. H. Firth, *Ludlow's Memoirs* (Oxford, 1894), I, 194 ff.; Denzil Lord Holles, "Memoirs" in *Masere's Tracts* (London, 1815), pp. 228 ff.; and Thomas May, "A Breviary of the History of the Parliament of England" in *Masere's Tracts*, pp. 90 ff.

[2]That the quorum of forty members was difficult to secure is evident in the following division totals:

November 24, 1642	44	May 13, 1646	46
April 8, 1643	39	September 25, 1647	48
August 24, 1643	39	October 20, 1647	49
November 3, 1643	42	September 5, 1648	48

[3]In the late summer and autumn months members were often attracted to their country homes or to the "healing waters for the Recovery of Health." In 1641, 1646, and 1647, for example, when the plague and smallpox epidemics struck the metropolis, attendance dropped noticeably. Though a formal request was necessary to leave the debates—except on official business—it was not difficult to secure permission. See the *Commons Journals* for this period and John Graunt's analysis of the plague in *The Economic Writings of Sir William Petty*, ed. C. H. Hull (Cambridge, 1899), p. 426 ff.

[4]Throughout this period the Lower House (which claimed full power over its own membership) adopted diverse means to discourage absenteeism. In May 1641, for instance, all members in London were required to attend the debates or face contempt of the House (*Commons Journals*, May 5, 1641). Later the House ruled that no members should be "absent without leave" (*Commons Journals*, April 1, 2, 1642). Soon

There is no foolproof method of determining exactly how many and which Commoners were present at the debates on a given day, for, unlike the House of Lords, the Lower House kept no attendance records. Thus, to determine the attendance habits of the Long Parliament members one must rely on the frequent divisions, the irregular roll calls, and the testimonies of contemporaries. Of these three categories of evidence, the parliamentary division is the best barometer for the annual and seasonal fluctuations of attendance.

Although the first division probably occurred in 1593 and though certain precedents were established by 1604, not until 1607 did the parliamentary secretary set it out in the *Journal*.[5] It was used more and more frequently in the parliaments of James I and Charles I, but only after the beginning of the Long Parliament did the division become a common parliamentary practice. It was an indication of disagreement and sharp differences of opinion in which the opposing parties were rather evenly matched. As such it serves as an index to partisan fervor, as the following figures demonstrate:

Frequency of Divisions, 1640-1648[6]

	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
1640											1	0	1
1641	0	1	3	2	4	5	5	4	6	2	12	9	53
1642	3	5	6	4	4	6	5	3	2	0	4	9	51
1643	7	17	13	9	6	4	4	7	2	3	5	1	78
1644	1	1	5	3	3	2	1	4	3	4	5	7	39
1645	1	4	4	2	6	1	5	6	0	5	4	3	41
1646	3	5	7	12	13	9	5	5	12	14	7	14	106
1647	6	10	12	12	15	14	9	14	6	8	14	10	130
1648	11	16	11	8	12	1	6	6	5	8	15	11	110
	36	66	61	52	53	42	40	49	36	44	66	64	609

threats of disablement and expulsion were used to force the members to attend. The fact that these measures were passed not only once in the eight-year period, but several times, is a sure indication of endemic absenteeism. See also: Godfrey Davies and Edith Lucile Klotz, "List of Members Expelled from the Long Parliament," *Huntington Library Quarterly*, II (1939), 479-88; and D. Brunton and D. H. Pennington, *Members of the Long Parliament* (London, 1954), appendixes I and V.

[5]Cf. E. and A. G. Porritt, *The Unreformed House of Commons* (Cambridge, 1909), I, 535-39 and Catherine S. Sim's note "Policies in Parliament: An Early Seventeenth Century Tractate on House of Commons Procedure," *Huntington Library Quarterly*, XV (1951), 45-58.

[6]These figures are based on tabulations from the *Commons Journals* from 1640 to

The divisions also serve to illustrate attendance trends and habits in the Long Parliament. Though at first, perhaps, some members abstained from voting, as time wore on party discipline became more rigid and penalties for absenteeism became the order of the day. Initially all members were required to attend the debates or face contempt of the House; then fines were set for those members "absent without leave"; finally all members present were compelled to vote in a division, thus eliminating the negligent, indifferent, or vacillating members.[7] Thus it is fairly safe to assume that the division totals approximate the attendance for a given day.

What do these totals indicate? At no time did more than three hundred and eighty (80%) and rarely more than two hundred and fifty (50%) of the original five hundred members vote.[8] In fact, the approximate attendance average for the eight-year period was about one hundred and twenty-five members per debate (or 25% of the total membership). From the following chart it is evident that absenteeism, and other contingent factors, was a perennial problem from 1640 to 1648:

1648. I have selected Pride's Purge on December 6, 1648 as the terminal date of this study. Though the number of divisions dropped through December 1648 and January 1649, it increased after February.

[7] *Commons Journals*, March 2, 1644, N.S., and footnote 4 of this paper.

[8] The following dates and the respective divisions represent the high points in attendance:

March 1, 1641	379	March 5, 1647	306
March 3, 1641	349	May 25, 1647	251
March 6, 1641	320	May 27, 1647	270
May 24, 1641	323	June 3, 1647	277
November 22, 1641	310	June 15, 1647	261
November 24, 1641	332	June 16, 1647	269
January 27, 1642	346	November 3, 1647	264
May 8, 1646	269	April 28, 1648	264
May 26, 1646	269	May 24, 1648	255
December 19, 1646	260	December 4, 1648	238
December 22, 1646	255		

Monthly Attendance Averages Based on the Division Totals[9]

	J	F	M	A	M	J	J	A	S	O	N	D
1640											317	n.d.*
1641	n.d.*	257	350	279	205	289	205	134	105	139	276	195
1642	243	168	120	170	175	166	124	76	79	n.d.*	99	105
1643	93	142	95	94	96	78	105	101	62	79	88	84
1644	135	116	122	139	129	119	133	92	81	91	76	142
1645	170	94	99	87	102	85	108	92	n.d.*	97	128	127
1646	134	170	127	116	212	179	222	163	179	108	171	185
1647	161	187	164	144	158	207	121	160	82	84	151	138
1648	123	96	111	162	151	138	109	116	101	114	125	155[10]

Some of these trends bear closer scrutiny. As the revolution progressed and as partisan struggles became more bitter and frequent, attendance gradually decreased, despite periodic increases. Wartime attendance was poorer than peacetime. Note for example the sudden drop in the summer of 1642 when the Civil War began, and the steady wartime average from that time to the end of the 1645 campaign. The influx of two hundred and seventy-five newly elected recruiters and the lively peace discussions account for the steady increase during the period from 1646 to 1648.[11] The best record was achieved in March, 1641, when church reform was under debate; while the lowest point occurred in September, 1643, when Parliament's military fortunes were at a low ebb.

Seasonal variations are more difficult to explain. But generally speaking the attendance was better during the winter than in the summer; in wartime many members were busy with the summer campaign, and in peacetime they sought refreshment and recreation in the country. The consistently low attendance in the months of August, September, and October was due in part to the annual

*Signifies no divisions during the month.

[9]In this tabulation I have simply totaled the votes by adding the "aye's" and "no's" listed in the *Commons Journals* and averaged them by the month. It should be pointed out that the four tellers used to count the votes did not include their own vote in the total; hence the absolute attendance exceeded the above figures by at least four.

[10]The average attendance before December 6, 1648, was about 210, while after that date it was about 58.

[11]Sickness, death, disablement, and expulsion seriously depleted the ranks of Parliament from 1640 to 1645. These vacancies were filled by "recruiters," who won their seats in the parliamentary by-elections. See R. N. Kershaw's article: "The Recruiting of the Long Parliament," *History*, VIII (1924), 698-709.

plague and smallpox epidemics from which the members, like thousands of Londoners, fled each year.[12]

It is hardly necessary to repeat that absenteeism was a crucial problem in the Long Parliament. As more members acquired military commands and as more ex-commanders took seats in the Lower House the problem amplified. In the spring of 1648, during the early crises of the Second Civil War, the Independents lost many issues and the initiative in Parliament simply because the Army members could not be in two places at the same time.[13] The Presbyterians naturally took advantage of this situation and regained their hold in the Lower House by readmitting the eleven Presbyterian leaders who had been expelled by the Army in 1647 on grounds of high treason. They also reshuffled the important committee assignments, demanded roll calls, and emphasized strict attendance.[14] Ludlow fully realized this acute problem and attributed it to "the absence of diverse members who belong in the Army."[15]

So, while the Independents won victories over their royalist enemies in the Second Civil War, they lost many parliamentary skirmishes because they were outnumbered and outwitted by their Presbyterian allies. Upon returning to their seats in St. Stephen's

[12]This subject (the relationship between the plague and politics) deserves more attention than it has received. From 1603 to 1666 the plague had an inestimable effect on politics, especially parliamentary attendance. To illustrate, in 1641 John Pym took advantage of a political vacuum created in part by fear of an impending plague and conceived the Grand Remonstrance. Compare John Graunt's statistics on seventeenth-century plagues and attendance statistics for the Long Parliament.

[13]In the spring of 1648 royalist insurrections in Scotland, Wales, Kent, and Essex forced the Army members to leave their seats in St. Stephen's Chapel in order to suppress the fires of revolt. "The face of the English Parliament was now suddenly changed," wrote Thomas May in his "Breviary History" (I, 126).

[14]After the First Civil War roll calls were used by both Independents and Presbyterians to encourage attendance at the debates. Though, no doubt, both parties resorted to this tactic in hopes that their own ranks would be increased, it did not always produce the intended effect, and frequently the calling of the roll was even postponed because of low attendance. On June 6, 1648, for instance, a scheduled roll call was postponed until August 7, but on that date there was such a "small appearance" that it was postponed three more times (August 4, September 6, 26). Finally, on September 26 the roll was called, but even then 166 members were absent, many without leave. On this point see the *Commons Journals*, July 17, 1646; July 27, October 9, November 3, 1647; April 24, May 24, June 6, August 7, 14, September 26, 1648.

[15]Firth, *Ludlow's Memoirs*, I, 194.

Chapel, the Army members faced a well-disciplined majority which was bent on writing the peace in its own terms. After having won the war but lost control of the legislative processes, the Independent minority, sparked by an uncompromising radical wing, chose to use force rather than lose the peace. Thus absenteeism was an important though indirect cause of Pride's Purge.

VERNON F. SNOW

Acquisitions

November 16, 1954—February 15, 1955

IN ORDER to inform scholars and friends of developments in the Huntington Library's collections, each issue of the *Quarterly* will note briefly the more important acquisitions. It will be impossible to list all of the purchases and gifts received in the three-month period between numbers of the *Quarterly*, but books, manuscripts, and prints of special importance will be mentioned.

English History and Literature

Among the large number of English books printed between 1641 and 1700 acquired by the Library recently are works by George Atkinson, William Dewsbury, George Fox, and James Parnell, all published in the 1650's. A rare little item is a work entitled *An essay upon the nature and qualities of tea* (London, 1699), by John Ovington, Chaplain to His Majesty William III.

An important addition to eighteenth-century materials is a collection of 200 titles by and about Richard Brinsley Sheridan and other members of his family. Many of the volumes contain family notes and inscriptions. A number of first or early editions of Sheridan's plays are included, one of the rarest being the 1786 New York edition of *The School for Scandal.*

A collection of 111 broadsides and six pamphlets dealing with the expected invasion of England by Napoleon in 1803 has come to the Library through the generosity of the Friends. These broadsides, all printed in England, illustrate the propaganda methods used to arouse the English man-in-the-street to the dangers of the expected invasion.

James Catnach (1792-1841), a printer turned publisher, printed hundreds of broadside ballads and hawked them around the streets of London, making his fortune in the process. The Friends have presented the Library with two bound volumes containing over 300 of these ballads.

Through the generosity of Mrs. James R. Page, the Library has acquired a beautiful copy of a Sarum missal printed in Paris in 1515. According to the *Short Title Catalogue* only four other copies of this edition are known, two in England and two in America. In this copy all references to Thomas á Becket and all "Romish" elements have been crossed out by hand.

American History and Literature

The February issue of the *Quarterly* reported the recent purchase of a collection of drawings and paintings by George Catlin. The Library's holdings of Catlin's printed work have now been expanded by the purchase of the only important title hitherto lacking—his *North American Indian Portfolio* (London, 1844), containing twenty-five highly colored lithograph plates.

A rare Russian account of Alaska written by Admiral Ferdinand Wrangell and printed in St. Petersburg in 1839 materially strengthens the Library's holdings in early Alaskan history. Although printed in Russia the work here appears in a German translation.

Over 1000 autograph letters written by John Fiske, the American historian, were recently acquired from his daughter. They were written between 1856 and 1901, mainly to his mother and wife. Of the letters 800 have never been published.

The first installment on microfilm of the Adams family papers has been received. The first lot consists of eighty-eight reels of film containing the manuscript diaries of John Adams, his son John Quincy Adams, and Charles Francis Adams. The diaries of the three men cover the years 1755 to 1880 almost without a break.

To complete its holdings of one of the most important California newspapers the Library recently purchased a file of the *Sacramento Union*, consisting of eighty-four volumes issued between 1856 and 1906.

The Max Farrand Travel Fund has been utilized extensively recently to purchase a number of important items in the field of travel literature. Some of the titles are: Elisha Ayers, *A Journal of Travel* (Preston, Conn., 1847); Nicolas Louis Bourgeois, *Voyages intéressans dans différentes colonies françaises* . . . (London, 1788);

Jonathan Carver, *Travels through the Interior Parts of North America* (London, 1781); Henry McMurtrie, *Sketches of Louisville . . .* (Louisville, 1819).

Botanical Library

To accompany the Library's two editions of Philip Miller's *Gardener's and Botanist's Dictionary*, the first edition of 1724 and the large four-volume edition of 1807 have been acquired. Miller's book was very popular, going through many editions in his lifetime and after. No two editions are the same, new material having been added as new varieties and methods of plant propagation were discovered. The 1807 edition, generally considered the best, contains 300 large colored plates.

What is probably the first nursery and garden catalogue issued in California has been added to the botanical collections. Warren and Sons Nursery, formerly of Boston, moved to Sacramento in 1853. Their catalogue, though printed in Boston, was issued in Sacramento later that same year. Of special interest to the Library is the short paragraph announcing the introduction of camellias into California.

Prints and Drawings

Through the generosity of Mrs. J. E. Hemphill the Library has received a collection of thirty water-color and pencil sketches of army forts in the west made between 1869 and 1910. The artist was Colonel Joseph B. Girard, the donor's father.

An important addition to the color-plate book collection is J. B. Pyne's *Lake scenery of England* (London, 1853), containing twenty-four large colored lithograph plates.

The William Blake holdings have been further extended by the acquisition of the *Book of Urizen*, one of the excellent Muir facsimiles.

Carey S. Bliss

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In quoted matter, unless there is strong reason for retaining the type peculiarities of the original, it is desirable to expand contractions, lower superior letters, substitute "v" for "u" (or vice versa), "j" for "i," "w" for "vv," etc., in accordance with modern usage. Greek should be transliterated, and long quotations in Latin, Greek, or other foreign languages should be translated. If desirable, the original language may be reproduced in footnotes. In every case clarity, both in typography and language, is the aim.

The ordinary citation of a book includes the author's name, the title of the book, place and date of publication, volume and page numbers. The title is underscored to indicate italics. [Example: Victor S. Clark, *History of Manufacturers in the United States* (New York, 1929), I, 38-43.] The title of an article in a periodical or continuing series should be inclosed in quotation marks and followed by the title of the periodical. [Example: Isaac Lippincott, "Industrial Influence of Lead in Missouri," *Journal of Political Economy*, XX (1931), 695-715.] If the work is an edited one, the title should be followed by the editor's name. [Example: *Speeches, Correspondence and Political Papers of Carl Schurz*, ed. Frederic Bancroft (New York, 1913), I, 55-57.] For a work lacking pagination, use the signatures instead of page references: Sig. $A3^v$. If a work cited is in a series, the name of the series, followed by the serial number, if given, should precede the place of publication. [Example: Carl R. Fish, *The Civil Service and the Patronage*, Harvard Historical Studies, XI (New York, 1905), pp. 101-103.] If a particular edition of a work is cited, the number of the edition precedes the place of publication. [Example: *A Manual of Style*, 11th ed. (Chicago, 1949).]